

Cancer in Tennessee

1997 – 2003



Tennessee Cancer Registry
Office of Cancer Surveillance
Policy Planning & Assessment
Tennessee Department of Health

August 2006



Cancer in Tennessee

1997 – 2003

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<http://www2.state.tn.us/health/TCR/index.htm>

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Front cover photograph is of the Smokey Mountains. The back cover photographs are a collage of Tennessee sites.

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I. INTRODUCTION

This publication represents the first annual statistical report of the Tennessee Cancer Registry (TCR) since it began collecting data in 1983. The following tables present statewide, age-adjusted incidence rates and counts for all cancers diagnosed among Tennessee residents during the period 1997 – 2003 and comparisons of state and national rates for data available for the period 1999 - 2003. At the time of this publication, 2003 US data was not available and is noted in the tables.

The primary goal for this report is to provide 1997 – 2003 data for health planners, researchers and the citizens of the State of Tennessee. Data are provided statewide for four population subgroups: white men, white women, black men and black women. Data are also provided by gender for all races combined. This report as well as data by gender is available on the Tennessee Cancer Registry website,
<http://ww2.state.tn.us/health/TCR/index.htm>.

Tennessee cancer incidence data are reported to the registry by hospitals, pathology laboratories, ambulatory surgery treatment centers and urologists. All primary invasive and *in situ* neoplasms are reportable to the TCR, except cervical cancer *in situ* diagnosed after 1994 and certain carcinomas of the skin. Benign tumors (although benign brain and other central nervous system tumors, have become reportable as of January 1, 2004), benign polyps, basal cell carcinomas of the skin, and *in situ* and localized squamous cell carcinomas of the skin are excluded from the registry.

For each year, the age-adjusted incidence rates per 100,000 population are shown for reportable categories of cancer and for all sites combined. For women, breast cancer *in situ* statistics are shown but not included in the totals for all sites combined. For both men and women, bladder cancer *in situ* cases are included with invasive urinary bladder, urinary system and all sites. Basal and squamous cell skin cancers are not collected and therefore not included in the data tables. These conventions are standard practice for publication of cancer rates in the United States.

II. TECHNICAL NOTES

Registry Overview

The mission statement of the Tennessee Cancer Registry (TCR) states it is dedicated to the collection and use of quality data for the purpose of decreasing the incidence and mortality of cancer in Tennessee.

The objectives of the TCR are to:

- promote scientific research
- respond to Tennessee residents about cancer concerns
- educate the public
- provide information for planning and evaluating cancer prevention and control activities
- share and compare cancer data with other states and the nation

The TCR is a population-based central cancer incidence registry that serves the entire state of Tennessee, which has a population of over 5.6 million people. The TCR was established in 1983 by the Tennessee Department of Health (TDoH) in response to a state law, Tennessee Code Annotated 68-1-1001 et seq., that made cancer a reportable condition. This law requires hospitals, laboratories, facilities, and health care practitioners to report to the TDoH information on patients diagnosed and/or treated for cancer in the state. The TCR follows the TDoH's Cancer Reporting System Rules, Chapter 1200-7-2. These rules provide for the implementation of the Tennessee Cancer Reporting System Act of 1983 and its amendments. In May 2000, the Tennessee General Assembly amended this law broadening its scope by expanding the number of reporting sources, allowing access to medical records in the event data is not reported, and providing for the interstate exchange of data. This amendment strengthened the TCR by establishing penalties for late or incomplete reporting.

In 1992, the 102nd Congress passed Public Law 102-515 which allows states to receive federal grants to support population-based statewide cancer registries. The TCR has received federal funding from the Centers for Disease Control and Prevention (CDC) through the National Program of Cancer Registries (NPCR) since 1997. The TCR is a member of the North American Association of Central Cancer Registries (NAACCR), an organization that sets standards for cancer registries, facilitates data exchange, and publishes cancer data.

Data Sources

Tennessee rules (Chapter 1200-7-2) require the reporting of all newly diagnosed cancer cases to the TCR within six months of the date of diagnosis. Selected facilities in Tennessee are now required to report cancer cases electronically. In addition, reporting agreements are maintained with most states that are contiguous to Tennessee, including Alabama, Arkansas, Mississippi, Missouri, Louisiana, Kentucky, North Carolina, West

Virginia and Georgia. This helps to ensure that Tennessee residents diagnosed with cancer outside the state can be identified.

The information collected by the TCR includes basic patient identifiers, demographic characteristics of the patient, medical information on each cancer diagnosis (such as the anatomic site, histologic type and stage of disease), first course of treatment and vital status (alive or deceased) determined annually. For deceased cases, the underlying cause of death is also included. The primary site, behavior, grade, and histology of each cancer are coded according to the *International Classification of Diseases for Oncology (ICD-O)*, 2nd edition for cancers diagnosed through 2000 and the 3rd edition for cancers diagnosed after 2000. The TCR follows the data standards promulgated by the North American Association of Central Cancer Registries (NAACCR), including the use of Surveillance, Epidemiology, and End Results (SEER) multiple primary rules. An individual may develop more than one cancer. Following SEER multiple primary rules, patients could therefore be counted more than once if they were diagnosed with two or more primary sites.

Data Quality

The criteria used to judge the quality of the data are completeness of cancer case ascertainment, completeness of certain information on the cancer cases, percent of death certificate only cases, percent of duplicate cases, passing an editing program, and timeliness. The TCR and reporting facilities spend a great deal of time and energy to ensure that the information they gather is both accurate and complete. Data is submitted annually to CDC/NPCR in January and to NAACCR in December.

Completeness of reporting is estimated by comparing Tennessee and U.S. incidence to mortality ratios for whites standardized by age, gender, and cancer site. The data used to generate these ratios were the cancer incidence rates for all SEER registries combined. Using these standard formulae, it is possible for the estimation of completeness to be greater than 100 percent.

Improved Reporting

While estimates of completeness are currently 86 percent for the 2003 reporting year, the TCR continues to work toward improving the quality and number of its reporting sources. Over the past year (2005), significant improvements have been realized in this regard. One of the most significant improvements has been the implementation of pathology laboratory reporting. A pilot project has also been implemented with certain urologists throughout the state of Tennessee.

III. Methodology

The TCR collects data on Tennessee residents diagnosed and treated for invasive and *in situ* tumors. Benign tumors (except for benign brain and other central nervous system tumors diagnosed on or after January 1, 2004), benign polyps, basal cell carcinomas of the skin, and *in situ* and localized squamous cell carcinomas of the skin are excluded from the registry.

The information collected for each case includes the patient's name, address, birthdate, race, gender and Social Security number; date of diagnoses; primary site of cancer (coded according to the *International Classification of Disease for Oncology, 3rd edition (ICD-O-3)*); stage of disease; facility where initial diagnoses was made; method of diagnostic confirmation; and histologic type. The registry also contains information of cases diagnosed at pathology laboratories, radiation therapy sites, physicians' offices, and cases identified from death certificates.

Tennessee mortality data are obtained from death certificates on file with the Tennessee Department of Health. The mortality data presented in this report are limited to those deaths where cancer is listed as the underlying (i.e, primary) cause of death. For deaths that occurred in 1999, 2000 and 2001, causes of death are coded according to the *Tenth Revision of the International Classification of Disease (ICD-10)*. Deaths occurring prior to 1999 are coded according to the *Ninth Revision of the International Classification of Disease (ICD-9)*.

United States cancer incidence and mortality data are taken from the most recent annual statistical summary report, *United States Cancer Statistics, 2002 Incidence and Mortality* published by the Centers for Disease Control and Prevention. The mortality data are compiled by the National Center for Health Statistics (NCHS) and include all cancer deaths occurring in the United States, with cancer deaths defined as only those deaths for which cancer is listed as the underlying cause.

Cancer Incidence Coding

Beginning with the year 2000, the coding scheme for incident cancer cases changed from the *International Classification of Diseases for Oncology, 2nd edition (ICD-0-2)* to the *3rd edition (ICD-0-3)*. Several newly reportable cancers were added to the *ICD-0-3* manual and are presently grouped under "Ill-Defined and Unspecified" sites. The addition of chronic myeloproliferative disorders and myelodysplastic syndromes are responsible for a marked increase in the "Ill-Defined and Unspecified" sites in 2001 and 2002 from previous years. The following SEER web link contains additional information on the transition from *ICD-0-2* to *ICD-0-3*.

http://training.seer.cancer.gov/module_icd03/downloadables/ICDO3%20abstract%20n%20article%20NEW%20PDF.pdf

Beginning with the year 1999, coding and classification for cause of death is in accordance with the *10th Revision* of the World Health Organization's *International Classification of Diseases (ICD-10)*. From 1979-1998, cause of death is based on the *9th Revision (ICD-9)*. Changes in classification detail, coding rules, and classification code numbers with this new version have caused some discontinuities in trends for cancer deaths. Although these discontinuities vary, research has found that using *ICD-10* assigns approximately 0.7 percent more deaths to the category of cancer, which may slightly increase some site-specific mortality rates for 1999 and later.

Confidentiality

All data obtained by the TCR from medical records of individual patients are held in strict confidence, in compliance with the privacy rules of the Health Insurance Portability and Accountability Act (HIPAA). As specified in state law, researchers may obtain case-specific and/or patient-identifiable information from the registry only after submitting a written application that clearly states how the data will be used for the scientific study. In situations where contact with a patient is proposed, the applicant must substantiate the need for any such contact and submit written approval from an Institutional Review Board (IRB), as well as the Tennessee Department of Health's IRB. Upon favorable review by the TCR's Data Access Review Committee, the applicant must also agree to maintain the confidentiality and security of the data throughout the course of the study. It is the policy of the TCR to suppress numbers and rates for all cases with fewer than six.

Age-Adjusted Rates for Tennessee and the Year 2000 Standard

The U.S. Department of Health and Human Services requires that health data be age-adjusted using the U.S. Year 2000 population as a standard, beginning with the 1999 reporting year. Prior to the release of 1999 data, various federal and state agencies calculated disease rates using different U.S. population standards, including the 1940 and 1970 standard populations.

Calculations using the 2000 standard population do not indicate a change in cancer incidence or occurrence – only a different representation of the rates of reported cancer.

Tennessee Population Denominators Used in Age-adjusted Calculations

The population data used in this report to calculate age-adjusted rates were obtained from the Tennessee Department of Health's Division of Statistics. When comparing age-adjusted rates in this report to national rates and other cancer registry data, which may use U.S. Census population totals, slight variations may occur. See Appendix B for Tennessee population estimates by age, gender and race.

Definitions

Several technical terms are used in presenting the information in this report. The following definitions are provided to assist the reader.

Incidence Rate

An incidence rate is the number of new cases of a disease that occur in a specific time period within a specific population, divided by the size of the population. For example, if 10 residents of a county with 20,000 residents are diagnosed with lung cancer during a single year, then the incidence rate for that county for that year is .0005. Since cancer incidence rates are usually expressed per 100,000 population, this figure is then multiplied by 100,000 to yield a rate of 50 per 100,000 per year.

Mortality Rate (Death Rate)

A mortality rate is the number of deaths that occur in a specific time period within a specific population divided by the size of the population. Only those persons whose death certificate lists cancer as the underlying (i.e., primary) cause of death are included in a cancer mortality rate. Like incidence rates, mortality rates are usually expressed as the number of deaths per 100,000 population.

Age-adjusted rate

Age-adjustment is a statistical process that makes it possible to compare rates between populations that have different age distributions, and to compare rates within a single population over time. Almost all diseases or health outcomes vary according to age groups. Most chronic diseases, including most cancers, occur more often among older people. Other outcomes, such as many types of injuries, occur more often among younger people. The age distribution determines what the most common health problems in a community will be. One way of examining the pattern of health outcomes in communities of different sizes is to calculate an incidence or mortality rate, which is the number of new cases or deaths divided by the size of the population. In chronic diseases and injuries, rates are usually expressed in terms of the number of cases/deaths per 100,000 people per year.

A community made up of more families with young children will have a higher rate of bicycle injuries than a community with fewer young children. A community with a larger number of older individuals will have higher rates of cancer than one with younger individuals. This is true even if the individuals in the two communities have the same risk of developing cancer or being injured. Epidemiologists refer to this as confounding. Confounding happens when the measurement of the association between the exposure and the disease is mixed up with the effects of some extraneous factor (a confounding variable). Age-adjustment is a statistical way to remove confounding caused by age.

Age confounding occurs when the two populations being compared have different age distributions and the risk of the disease or outcome varies across the age groups. The process of age-adjustment by the direct method changes the amount that each age group contributes to the overall rate in each community, so that the overall rates are based on

the same age structure. Rates that are based on the same age distribution can be compared to each other without the presence of confounding the age. Adjustment is accomplished by first multiplying the age-specific rates of disease by age-specific weights. The weights used in the age-adjustment of cancer data are the proportion of the standard US population within each age group. The weighted rates are then summed across the age groups to give the age-adjusted rate.

The incidence and mortality rates in this report were age-adjusted using the United States population in 2000 as the standard and using Tennessee Department of Health population estimates as denominators.

Stage of Disease at Diagnosis

In situ

Cases diagnosed as *in situ* include malignant tumors that are confined to the cell group of origin, and have not penetrated the supporting structure of the organ on which they arose.

Invasive

Cases diagnosed as invasive include malignant tumors that, unlike *in situ* tumors, have at least penetrated the supporting structure of the organ where they originated, and may have spread further. Invasive tumors are subdivided into three categories:

Localized – A localized invasive tumor has not spread beyond the boundaries of the organ where it originated.

Regional – A regional invasive tumor has spread beyond the limits of the organ of origin, by direct extension to immediately adjacent organs or tissues and/or by spread to regional lymph nodes.

Distant – A distant invasive tumor has spread beyond its original (primary) site to distant parts of the body.

Reliability of Rates

Rates based on small numbers of events over a given time period or for sparsely populated geographic areas can vary widely year to year. This limits their usefulness in comparisons and estimation of further occurrences. Great caution should be used in assigning significance to rate changes from one year to the next for the majority of cancer sites in Tennessee and for geographic regions within the state. Multiple-year summary rates and trends over time provide better measurements and add credence to statements regarding rates.

Crude rates are not reliable for the purpose of comparing two different populations since they do not take into account demographic factors which influence the rate, such as age,

sex, and race. Age-, sex-, and race-adjusted rates will provide a more reliable measurement to compare experiences over geographic areas or time periods.

Caution should always be used in attributing differences in rates to any particular factor or set of factors. Many variables may influence rates; valid interpretation of the reason for rate difference requires extensive research.

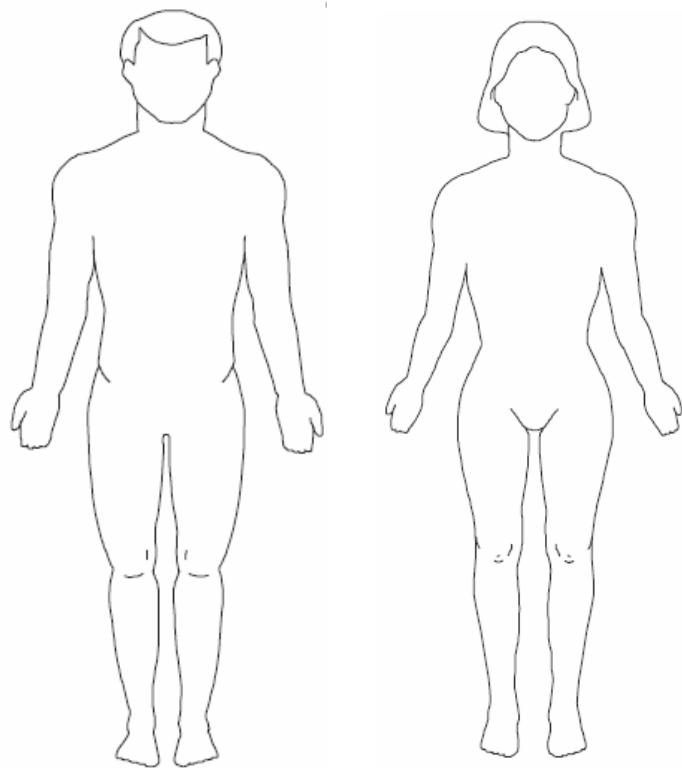
Although county rates of cancer incidence are based on population-based registries rather than estimates, caution should still be exercised in interpreting differences between jurisdictions. Given small numbers of cases and small populations, average annual age-adjusted rates for counties can vary widely year to year. In an effort to better assess the significant differences between county and state or U.S. rates, 95% confidence intervals were calculated for average annual age-adjusted county rates based on the following formula:

$$p \pm 1.96 \times \sqrt{\frac{p(1-p)}{n}}$$

In this formula, p represents the rate, and n represents the population. Differences in rates were interpreted to be significantly significant if the Tennessee rate or the U.S. rate fell outside the 95% confidence interval for the county rate.

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IV. All Cancer Sites Combined



All Cancer Sites Combined

Incidence and Mortality by Sex and Year

Tennessee Residents 1997 – 2003

Table 1.

Year	Total				Males				Females			
	New Cases	Incid. Rate	Deaths	Mort. Rate	New Cases	Incid. Rate	Deaths	Mort. Rate	New Cases	Incid. Rate	Deaths	Mort. Rate
1997	22,020	402.5	11,872	219.5	11,033	471.4	6,395	293.4	10,986	359.6	5,477	173.7
1998	22,503	404.0	11,968	217.5	11,256	472.0	6,437	289.2	11,247	362.1	5,531	172.4
1999	21,914	387.0	11,887	213.0	10,950	448.6	6,443	285.3	10,963	348.9	5,444	167.7
2000	22,835	398.8	12,309	218.4	11,320	457.9	6,607	288.8	11,515	362.7	5,702	173.8
2001	22,965	394.9	12,228	213.8	11,464	453.6	6,591	282.9	11,500	358.0	5,637	169.8
2002	23,744	401.5	12,506	215.2	11,750	456.6	6,719	283.3	11,993	366.9	5,787	171.6
2003	24,985	415.9	12,595	213.1	12,565	482.9	6,664	276.7	12,419	373.8	5,930	172.8
99-03	116,443	399.8	61,525	214.7	58,049	460.2	33,024	283.3	58,390	362.2	28,500	171.2

Number of new cases excludes in situ cases in all except urinary bladder.

Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.

Overview

Incidence

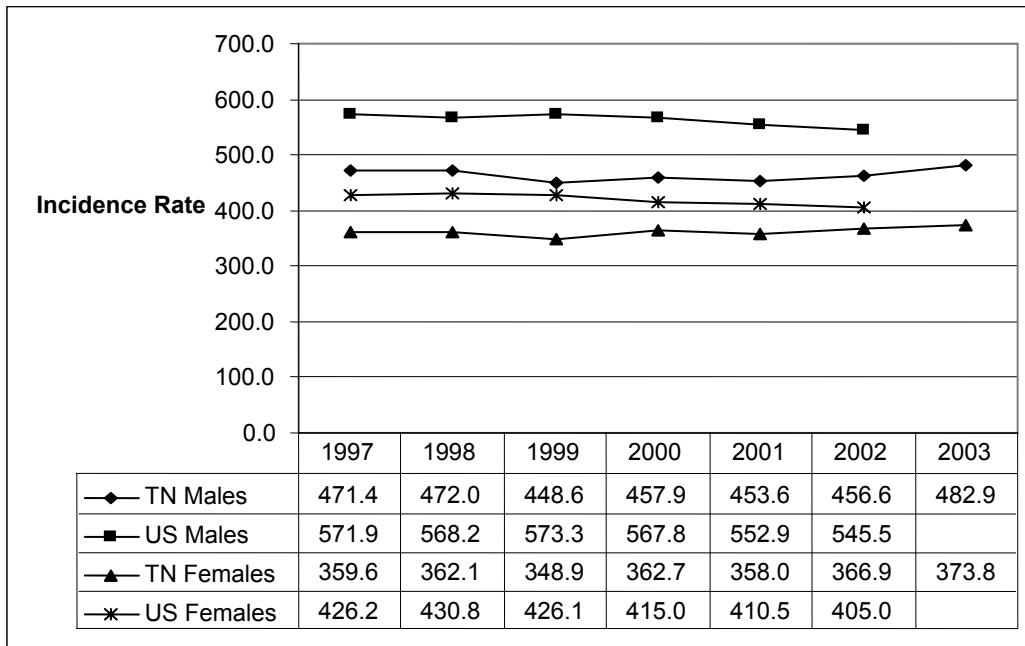
- Each year 1997 through 2003, over 22,000 Tennesseans were diagnosed with cancer (Table 1).
- For Tennessee males during 1999-2003, the most commonly diagnosed primary cancer was cancer of the prostate (average annual age-adjusted rate of 113.1 per 100,000 men). The second leading contributor to cancer incidence among men was cancer of the lung and bronchus (98.9 per 100,000 men). Cancer of the colon and rectum was the third leading primary cancer site (56.8 per 100,000 men) (Figure 3).
- For Tennessee women during 1999-2003, the most commonly diagnosed primary cancer was cancer of the breast (average annual age-adjusted rate of 116.5 per 100,000 women). As with men, cancer of the lung and bronchus was the second leading contributor to cancer incidence among women (52.2 per 100,000 women), and cancer of the colon and rectum was the third (41.3 per 100,000 women) (Figure 4).
- While some cancers occurred in childhood or early adulthood, the highest incidence occurred in individuals over the age of 45. The incidence of most types of cancers increases with increasing age.
- Overall, Tennessee has a lower incidence rate of all cancers combined (399.8) than the US rate of 469.7. At the county level, however, 47 counties have a higher rate than the state, with 17 of these counties having higher incidence rates than the US (Figure 7).

Mortality

- Cancer is the second leading cause of death in Tennessee, second only to heart disease, and results in the greatest number of years of potential life lost.

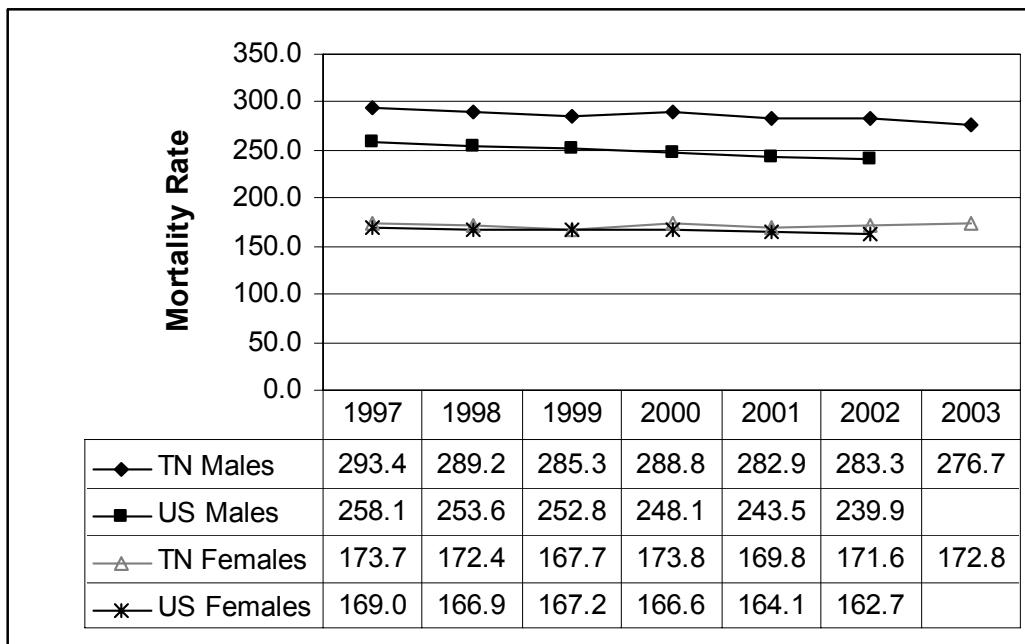
- Among males in Tennessee during 1999-2003, the leading cause of cancer-related mortality was cancer of the lung and bronchus, causing well over three times more cancer deaths than any other site (average age-adjusted mortality rate of 102.7 per 100,000). Cancer of the prostate ranked a distant second in cancer-related mortality (32.8 per 100,000) and cancer of the colon and rectum third (25.8 per 100,000) (Figure 3).
- Similarly, among Tennessee women during 1999-2003, cancer of the lung was the leading cause of cancer-related mortality (average annual age-adjusted mortality rate of 44.6 per 100,000 women), almost twice that of any other site. The second leading cause for women was cancer of the breast (26.3 per 100,000 women). Cancer of the colon and rectum ranked third (17.4 per 100,000 women) (Figure 4).

Figure 1.
All Cancer Sites Combined
Incidence Rates, Age-Adjusted
Tennessee Residents 1997-2003, US Residents 1997-2002



* Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population.
U.S. rates are from SEER (Ries et al., 2005).

Figure 2.
All Cancer Sites Combined
Mortality Rates, Age-Adjusted
Tennessee Residents 1997-2003, US Residents 1997-2002



* Rates are per 100,000 and are age-adjusted to the 2000 U.S. standard population.
U.S. rates are from SEER (Ries et al., 2005).

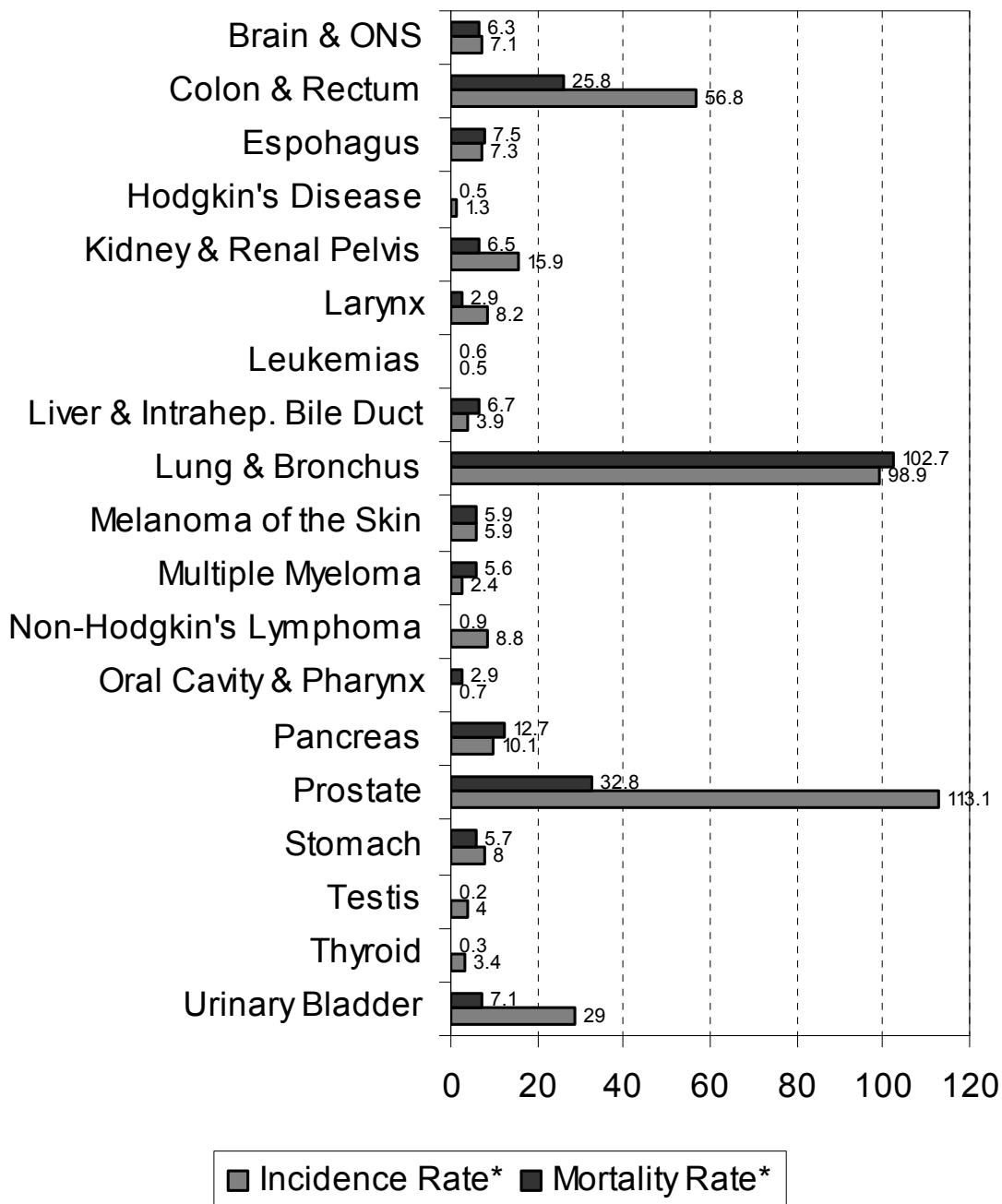
Table 2.
Highest Cancer Incidence Rates for Tennessee by Gender and Age
1999 – 2003

Gender	Ages in Years									
	Less than 15	Rate	15 to 24	Rate	25 to 44	Rate	45 to 64	Rate	65 and older	Rate
Male	Leukemias	3.6	Melanoma of the Skin	1.3	Colorectal	8.1	Prostate	171.7	Prostate	612.0
	Hodgkin's Disease	0.6	Leukemias	3.0	Lung & Bronchus	7.5	Colorectal	76.5	Colorectal	263.3
	Non-Hodgkin's Lymphoma	1.0	Hodgkin's Disease	5.4	Testis	8.7	Lung & Bronchus	141.3	Lung & Bronchus	523.1
	Brain & ONS	3.0	Brain & ONS	2.3	Melanoma	5.9	Kidney	29.2	Pancreas	51.9
	Kidney & Renal Pelvis	0.8	Testis	4.5	Brain & ONS	4.6	Urinary Bladder	31.2	Urinary Bladder	160.3
Female	Leukemias	3.2	Melanoma of the Skin	2.6	Breast	55.4	Breast	242.5	Breast	363.3
	Hodgkin's Disease	0.6	Hodgkin's Disease	3.6	Colorectal	8.3	Colorectal	56.4	Colorectal	212.4
	Non-Hodgkin's Lymphoma	0.6	Brain & ONS	4.3	Lung & Bronchus	6.8	Lung & Bronchus	87.8	Lung & Bronchus	244.0
	Brain & ONS	2.7	Thyroid	4.3	Thyroid	14.4	Corpus Uteri	38.2	Corpus Uteri	60.2
	Kidney & Renal Pelvis	0.9	Breast	1.0	Cervix Uteri	11.5	Ovary	22.5	Pancreas	42.4

* Rates are five-year annual age-specific incidence per 100,000 population. The five highest age-specific rates for 23 primary cancer sites are presented for each population subgroup; however, rates based on fewer than five cases are excluded.

Figure 3.

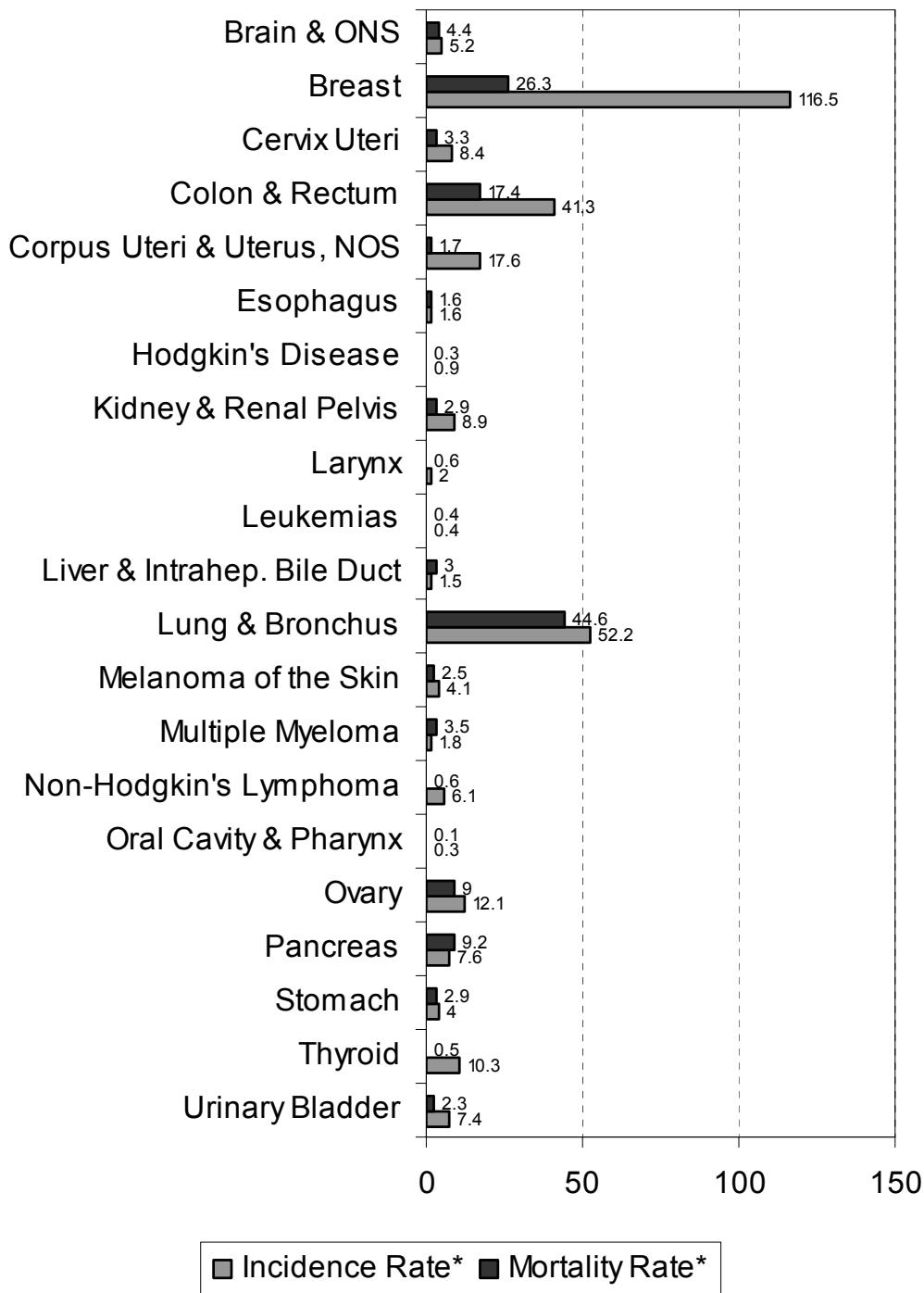
Burden of Cancer Among Tennessee Males 1999-2003



* Five-year average annual rate per 100,000 Tennessee males, age-adjusted to the 2000 U.S. Population. Incidence rates exclude basal and squamous cell skin cancers and *in situ* carcinomas except bladder.

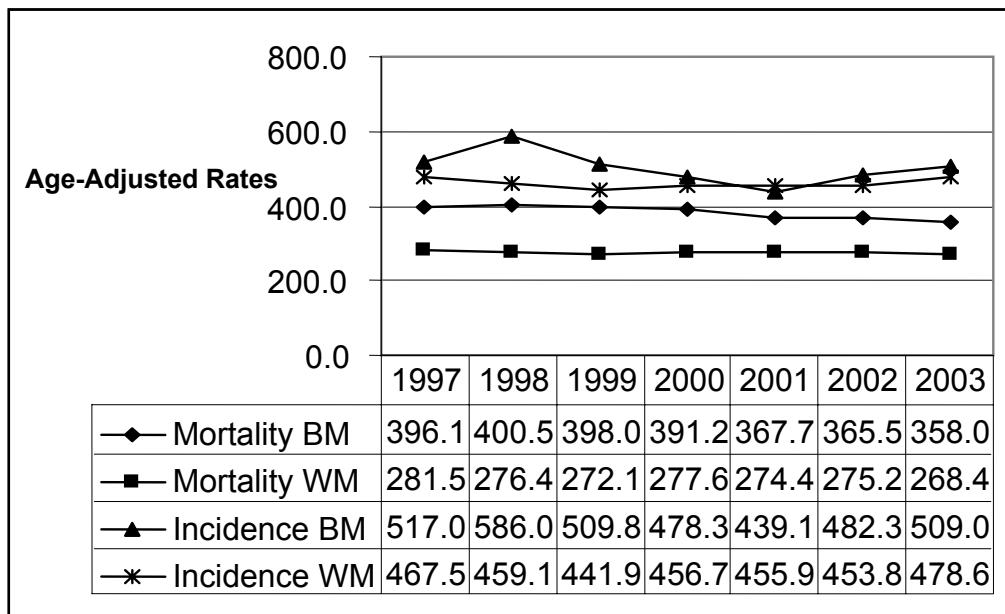
Figure 4.

Burden of Cancer Among Tennessee Females 1999 - 2003



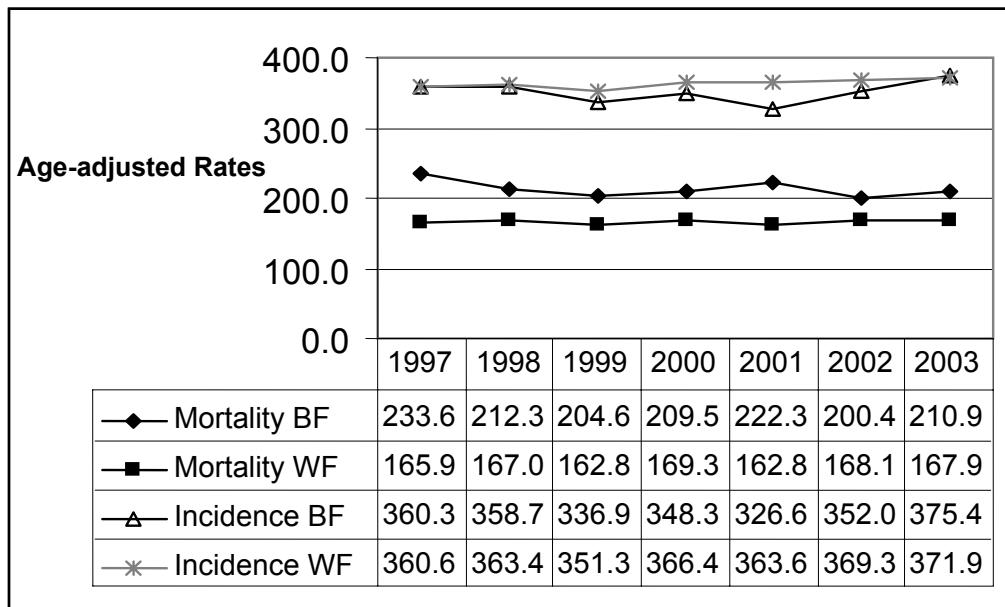
* Five-year average annual rate per 100,000 Tennessee females, age-adjusted to the 2000 U.S. population. Incidence rates exclude basal and squamous cell skin cancers and *in situ* carcinomas except bladder.

Figure 5. Incidence and Mortality in Tennessee Males, White vs. Black, 1997-2003



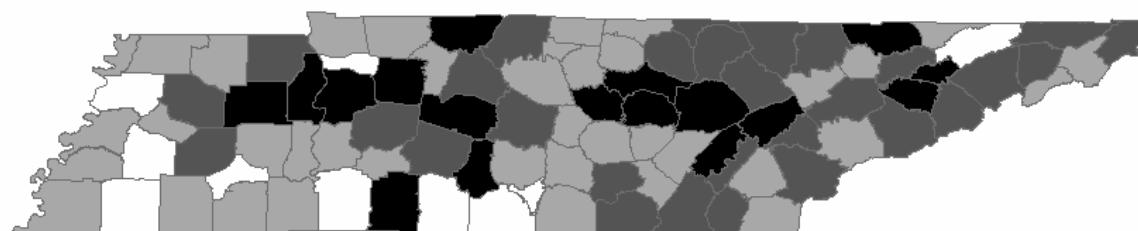
*Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.

Figure 6. Incidence and Mortality in Tennessee Females, White vs. Black, 1997-2003



* Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.

All Cancers Combined Incidence Rates
By County, Tennessee Males & Females 1999 - 2003



Rates



Tennessee Rate: 399.8
U.S. Rate: 469.7^a

^a Five-year average annual rate per 100,000 Tennessee males & females, age-adjusted to the 2000 U.S. standard population.
^b U.S. rate is 1998-2002 average annual age-adjusted rate and is from SEER (Ries et al., 2005).

Figure 7.

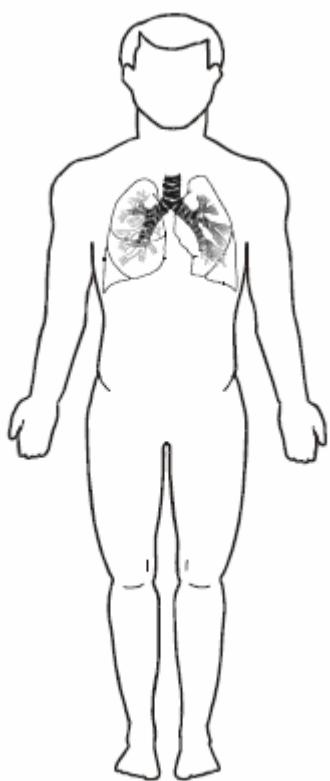
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V. TENNESSEE
INCIDENCE AND MORTALITY
FOR SELECTED CANCER SITES



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Cancer of the Lung and Bronchus



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Cancer of the Lung and Bronchus

Incidence and Mortality by Sex and Year

Table 3. Tennessee Residents 1997 – 2003

Year	Total				Males				Females			
	New Cases	Incid. Rate	Deaths	Mort. Rate	New Cases	Incid. Rate	Deaths	Mort. Rate	New Cases	Incid. Rate	Deaths	Mort. Rate
1997	3,994	72.8	3,860	70.6	2,470	105.7	2,500	110.1	1,524	49.5	1,360	43.3
1998	4,114	73.6	3,843	69.1	2,536	106.3	2,470	106.6	1,578	50.1	1,373	43.2
1999	3,953	69.5	3,772	66.8	2,436	99.3	2,443	103.6	1,516	47.7	1,329	41.3
2000	3,981	69.4	3,933	69.0	2,366	96.4	2,480	103.2	1,615	50.3	1,453	44.7
2001	4,077	69.9	3,988	69.1	2,459	97.8	2,553	105.3	1,618	49.7	1,435	43.6
2002	4,307	72.6	4,072	69.6	2,463	96.7	2,521	103.3	1,843	55.5	1,551	46.3
2003	4,628	76.8	4,040	67.9	2,697	103.9	2,442	98.4	1,931	57.5	1,598	47.0
99-03	20,946	71.7	19,805	68.5	12,421	98.9	12,439	102.7	8,523	52.2	7,366	44.6

Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.

Overview

- Each year from 1997 through 2003, approximately 4,000 Tennesseans were diagnosed with cancer of the lung and bronchus, making this the state's most commonly diagnosed cancer. This cancer accounted for almost one in every five invasive cancers diagnosed in Tennessee residents (Table 3 and 4).
- During 1999-2003, cancer of the lung and bronchus occurred about twice as often among Tennessee men as among Tennessee women (98.9 per 100,000 Tennessee men and 52.2 per 100,000 Tennessee women) (Table 3 and Figure 8).
- Overall, for the years 1999 – 2003, Tennessee has a higher incidence rate of lung and bronchus cancer than that of the U.S (71.7 vs. 67.5). Of the 95 counties in Tennessee, 65 have higher incidence rates than the U.S. Twenty-three counties have higher rates than the state rate. (Figure 14)
- In 1999-2003, cancer of the lung and bronchus remained the leading cause of cancer-related death in Tennessee for both men and women. Cancer of the lung and bronchus accounted for approximately one of every three deaths due to cancer in Tennessee (Tables 1 and 4).

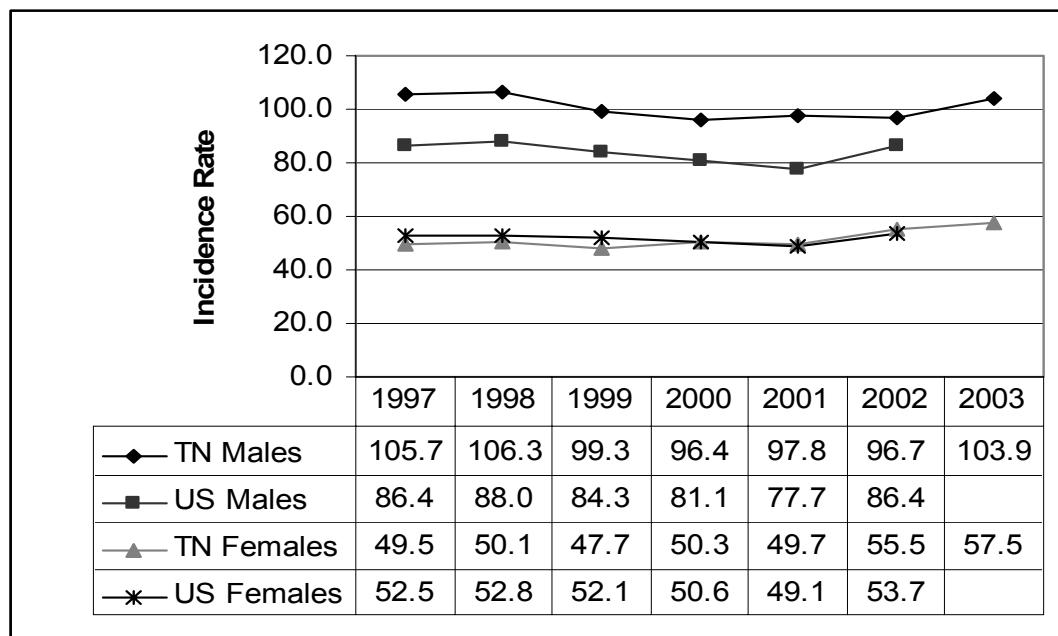
Risk Factors

- Smoking is the most important risk factor for cancer of the lung and bronchus. The Tennessee Behavioral Risk Factor Surveillance System survey estimates that the smoking prevalence rate for the 1997 to 2003 time period for the state has been between 26.0 – 27.7 percent.
- Other risk factors include exposure to arsenic, certain organic chemicals, asbestos, radon, radiation, and environmental tobacco smoke.

Prevention

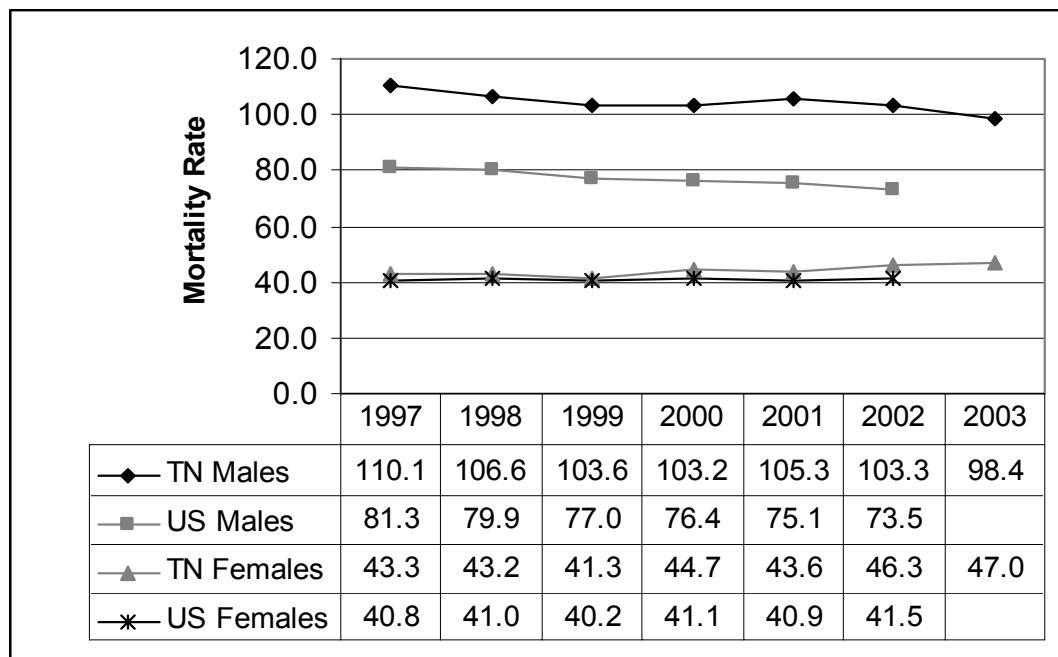
- Quitting smoking substantially decreases the risk of lung cancer.

Figure 8. Cancer of the Lung & Bronchus
Incidence Rates, Age-Adjusted
Tennessee Residents 1997-2003, U.S. Residents 1997-2002



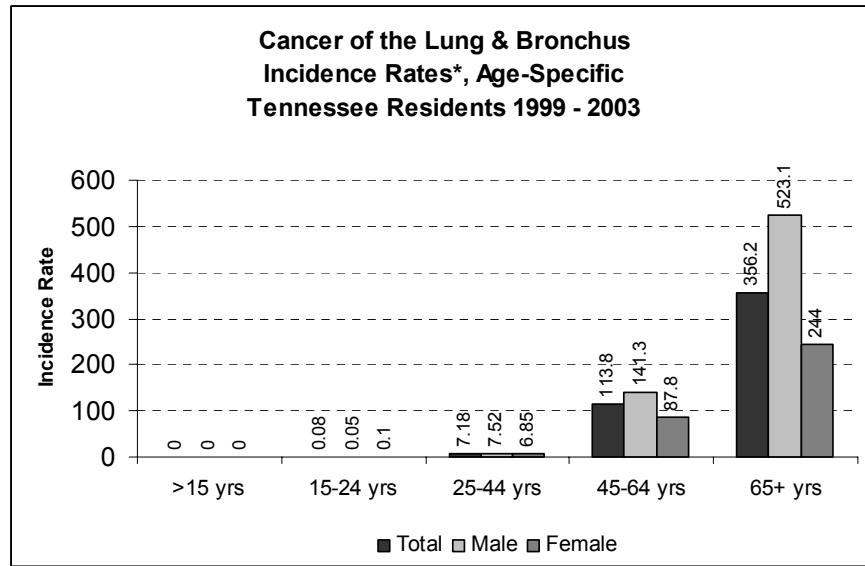
*Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.
U.S. rates are from SEER (Ries et al., 2005).

Figure 9. Cancer of the Lung & Bronchus
Mortality Rates, Age-Adjusted
Tennessee Residents 1997-2003, U.S. Residents 1997-2002



*Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.
U.S. rates are from SEER (Ries et al., 2005).

Figure 10.



**Table 4. Cancer of the Lung & Bronchus
Most Frequent Histologies
Tennessee Residents, 1999 - 2003**

ICD-O Code	Histology	% of Invasive Cases
804	Small Cell Carcinoma	25.7
807	Squamous Cell Carcinoma	24.4
814	Adenocarcinoma	23.6
801	Carcinoma	14.5
800	Malignant Neoplasm	3.5
825	Alveolar Carcinoma	2.3
824	Carcinoid Tumor	1.7

**Cancer of the Lung & Bronchus
Stage of Disease at Diagnosis
Tennessee Residents, 1999-2003**

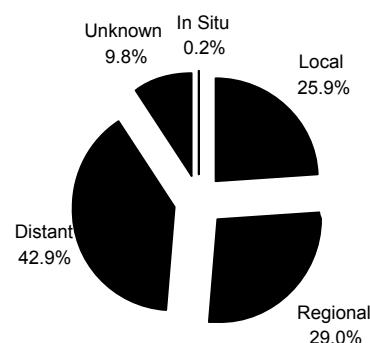
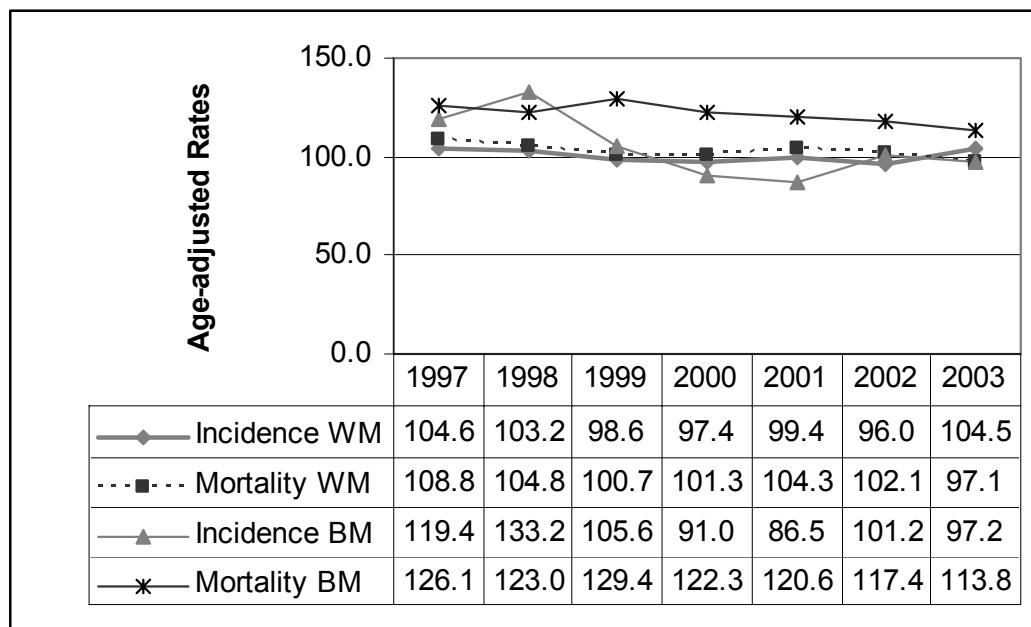


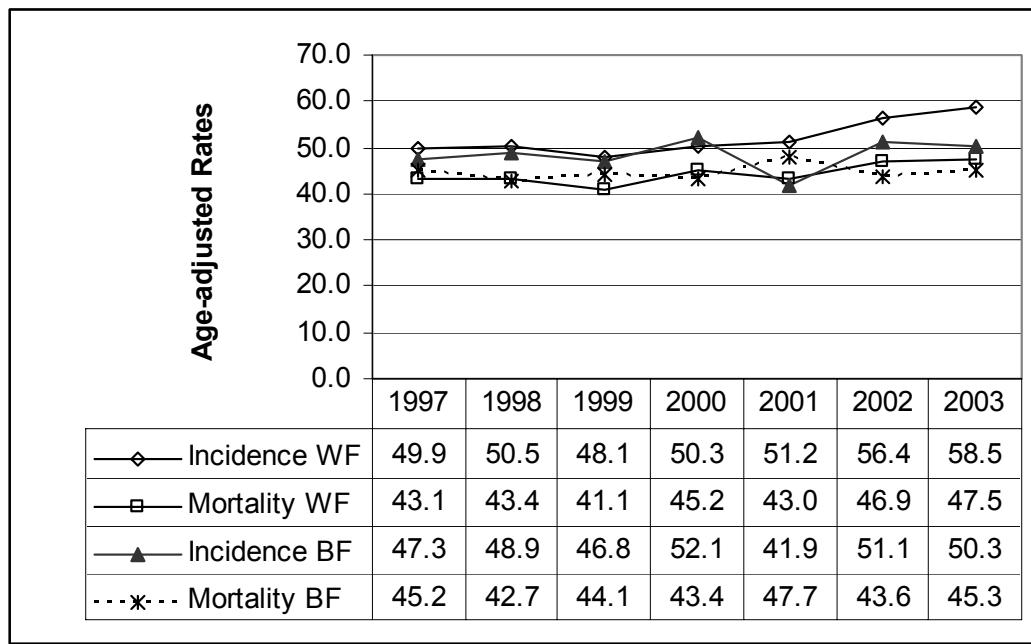
Figure 11.

Figure 12. Cancer of the Lung & Bronchus, Tennessee Males, White vs. Black, Incidence and Mortality, 1997 - 2003



*Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.

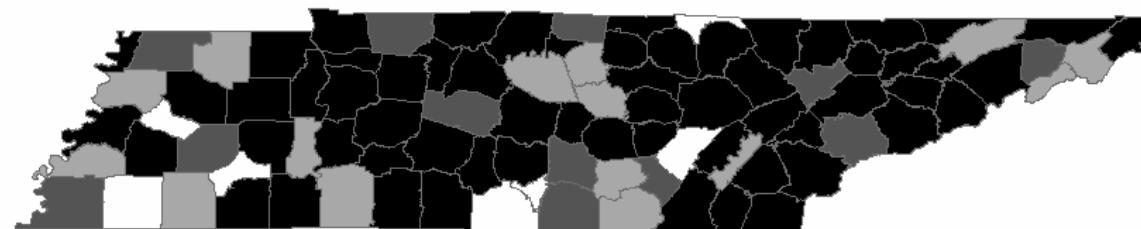
Figure 13. Cancer of the Lung & Bronchus, Tennessee Females, White vs. Black, Incidence and Mortality, 1997 - 2003



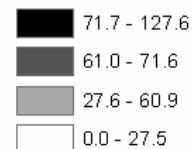
*Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.

Cancer of the Lung and Bronchus Incidence Rates

By County, Tennessee Males & Females 1999 - 2003



Lungrates.Rate

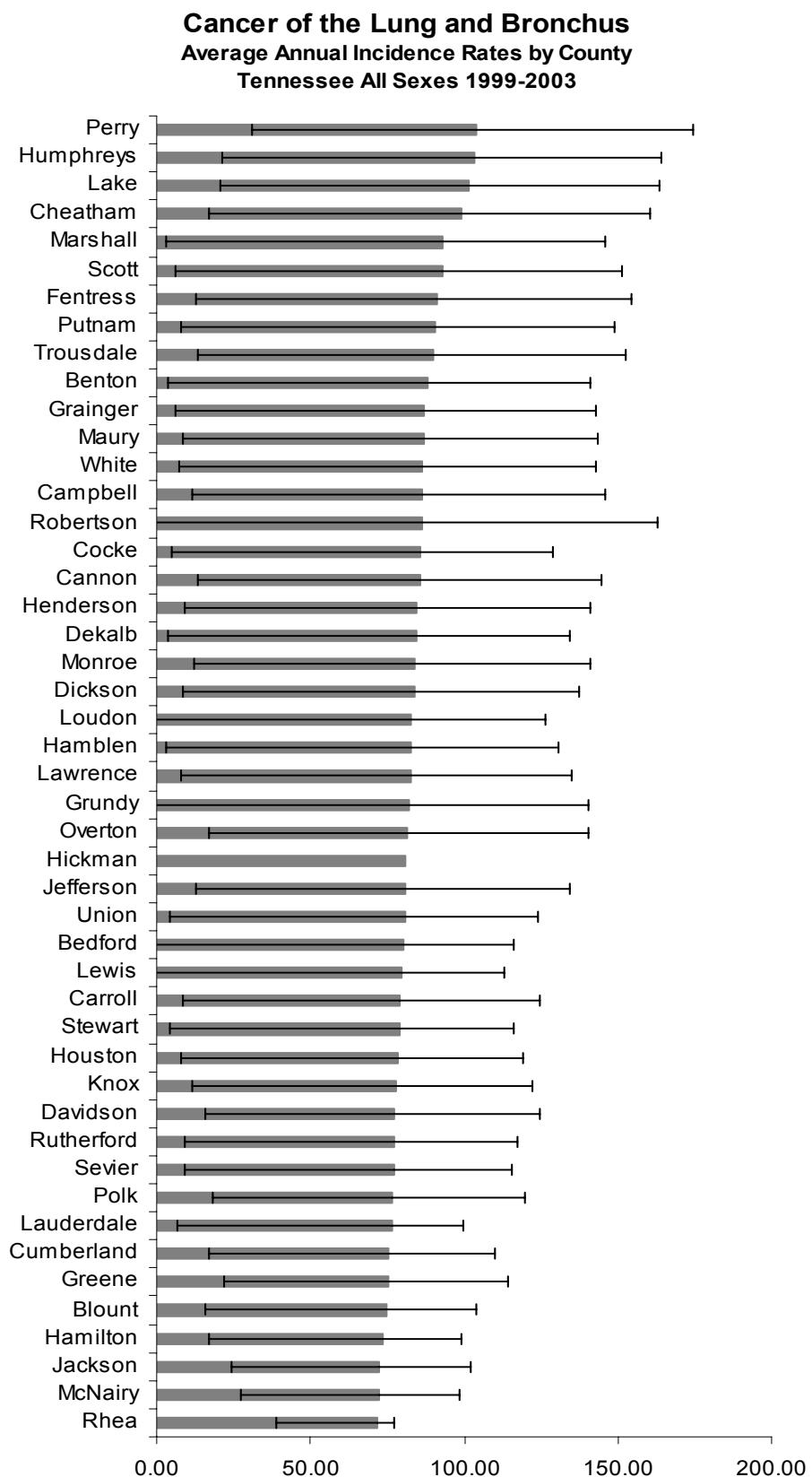


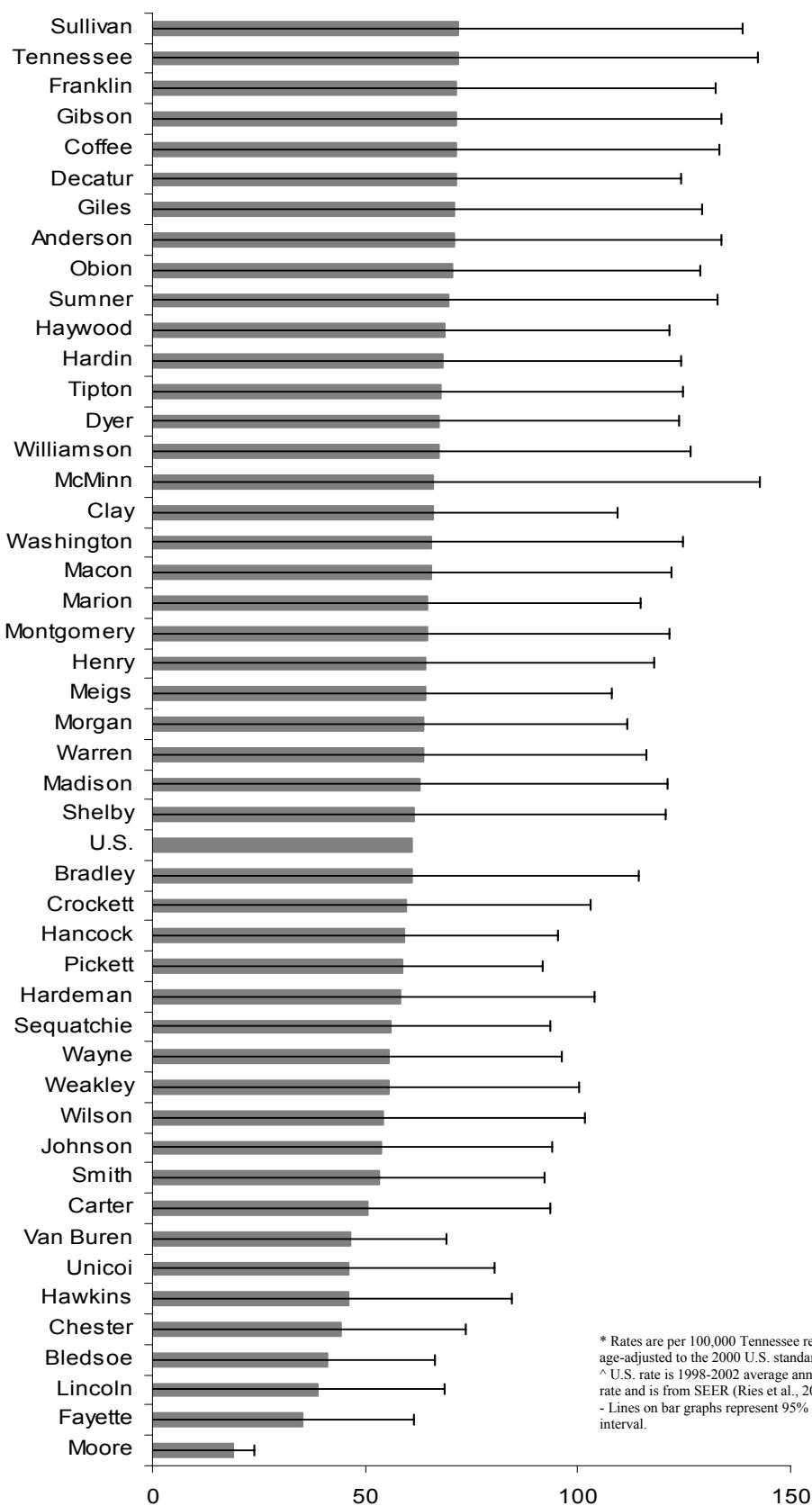
Tennessee Rate: 71.7
U.S. Rate: 61.0^a

^a Five-year average annual rate per 100,000 Tennessee males & females, age-adjusted to the 2000 U.S. standard population.
^b U.S. rate is 1998-2002 average annual age-adjusted rate and is from SEER (Ries et al., 2005).

Figure 14.

Figure 15.





* Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.
 ^ U.S. rate is 1998-2002 average annual age-adjusted rate and is from SEER (Ries et al., 2005).
 - Lines on bar graphs represent 95% confidence interval.

Table 5. Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
Lung and Bronchus, All Races, All Genders 1999-2003

County of Residence	Count	Rate	Significant Difference	
			TN	US^ (61.0)
Tennessee	20946	71.7	No	Yes
Anderson	317	70.8	No	Yes
Bedford	155	80.5	No	No
Benton	103	88.1	No	Yes
Bledsoe	28	41.0	Yes	Yes
Blount	456	74.6	No	No
Bradley	280	60.8	No	Yes
Campbell	212	86.4	No	Yes
Cannon	60	85.6	No	Yes
Carroll	146	78.9	No	Yes
Carter	173	50.6	Yes	Yes
Cheatham	142	98.8	No	Yes
Chester	36	44.1	Yes	Yes
Claiborne	188	109.3	Yes	Yes
Clay	34	65.8	No	Yes
Cocke	171	85.7	Yes	Yes
Coffee	200	71.5	No	Yes
Crockett	51	59.6	No	Yes
Cumberland	282	75.6	No	Yes
Davidson	2009	77.5	Yes	Yes
Decatur	58	71.4	Yes	No
Dekalb	84	84.3	No	No
Dickson	181	83.6	No	Yes
Dyer	135	67.5	No	Yes
Fayette	58	35.4	Yes	Yes
Fentress	91	91.2	Yes	Yes
Franklin	167	71.6	No	No
Gibson	216	71.6	No	No
Giles	122	71.0	No	No
Grainger	99	87.2	No	No
Greene	288	75.6	No	No
Grundy	67	82.0	No	Yes
Hamblen	269	82.5	Yes	Yes
Hamilton	1254	73.6	No	Yes
Hancock	25	59.3	No	No
Hardeman	83	58.1	Yes	No
Hardin	112	68.4	No	No
Hawkins	142	46.2	Yes	Yes
Haywood	71	68.7	No	No
Henderson	122	84.4	No	Yes
Henry	139	64.3	No	No
Hickman	95	81.0	No	No
Houston	41	78.7	No	No
Humphreys	113	103.5	Yes	Yes
Jackson	49	72.4	No	No
Jefferson	200	80.8	No	Yes
Johnson	59	53.8	Yes	No
Knox	1529	77.7	Yes	Yes
Lake	42	101.7	No	Yes
Lauderdale	101	76.6	No	No
Lawrence	186	82.4	No	Yes
Lewis	50	79.6	No	No
Lincoln	73	38.8	Yes	Yes
Loudon	222	82.7	No	Yes
McMinn	191	65.9	No	Yes
McNairy	110	72.1	No	Yes

County of Residence	Count	Rate	Significant Difference	
			TN	US^ (61.0)
Macon	71	65.4	No	Yes
Madison	281	62.6	Yes	No
Marion	103	64.8	No	Yes
Marshall	127	93.1	Yes	Yes
Maury	299	86.7	Yes	Yes
Meigs	40	64.0	No	No
Monroe	182	84.0	No	Yes
Montgomery	304	64.4	No	Yes
Moore	7	19.1	Yes	Yes
Morgan	64	63.7	No	Yes
Obion	136	70.4	No	No
Overton	103	81.2	No	No
Perry	50	103.7	Yes	Yes
Pickett	21	58.6	No	No
Polk	75	76.7	No	No
Putnam	300	90.4	Yes	Yes
Rhea	118	72.0	No	No
Roane	350	104.6	No	No
Robertson	221	86.1	Yes	Yes
Rutherford	493	77.1	No	Yes
Scott	100	92.9	Yes	Yes
Sequatchie	35	56.1	No	No
Sevier	309	77.1	No	Yes
Shelby	2337	61.6	Yes	Yes
Smith	51	53.4	Yes	No
Stewart	58	78.9	No	No
Sullivan	702	71.9	No	No
Sumner	439	69.7	No	Yes
Tipton	157	67.6	No	No
Trousdale	38	89.7	No	No
Unicoi	57	46.3	Yes	Yes
Union	70	80.6	No	No
Van Buren	15	46.5	Yes	No
Warren	136	63.5	No	Yes
Washington	392	65.7	No	Yes
Wayne	53	55.7	Yes	Yes
Weakley	105	55.4	Yes	Yes
White	123	86.5	No	Yes
Williamson	313	67.1	No	Yes
Wilson	223	54.4	Yes	Yes

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

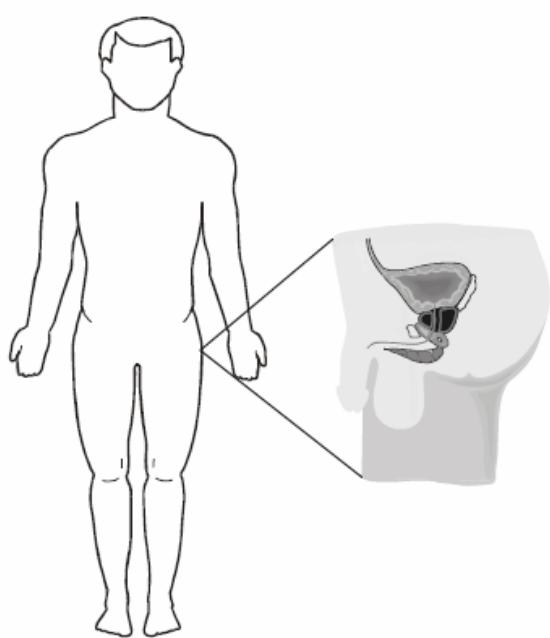
² Counts and rates are suppressed when fewer than 6 cases were reported

[^]U.S. rate is 1998-2002 average annual age-adjusted rate and is from SEER (Ries et al., 2005).

Differences between county rate and TN rate, and county rate and U.S. rate, is tested for statistical significance at the 95% confidence level ($p \leq .05$).

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Cancer of the Prostate



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Cancer of the Prostate

Incidence and Mortality by Year, Age-adjusted*

Table 6. Tennessee Residents 1997 – 2003

Year	Males			
	New Cases	Incid. Rate	Deaths	Mort. Rate
1997	2629	111.6	664	36.2
1998	2534	107.3	660	35.5
1999	2707	110.3	660	35.1
2000	2781	111.6	647	34.3
2001	2867	111.5	605	31.4
2002	3013	114.8	595	30.4
2003	3083	116.6	673	32.9
99-03	14451	113.1	3180	32.8

* Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.

Overview

- Cancer of the prostate was the most commonly diagnosed cancer among males in Tennessee during 1997-2003, with over 14,000 men diagnosed during the five year period of 1999-2003 (Figure 3 and Table 6).
- Cancer of the prostate very rarely occurred before the age of 45 and the incidence dramatically increased with age. Nearly 39 percent of prostate cancer was diagnosed in men age 45 -64 years and 36 percent in men age 65 and older (Figure 18).
- During 1999-2003 in Tennessee, 78.2 percent of men with prostate cancer were diagnosed with early (0.2 percent *in situ* or 78 percent local) disease. Stage at diagnosis was not reported in 7 percent of cases (Figure 19).
- Cancer of the prostate in Tennessee was the second leading cause of cancer-related mortality in men during 1999-2003 (Figure 3). It accounted for approximately one in ten male cancer deaths (Table 1 and 6).

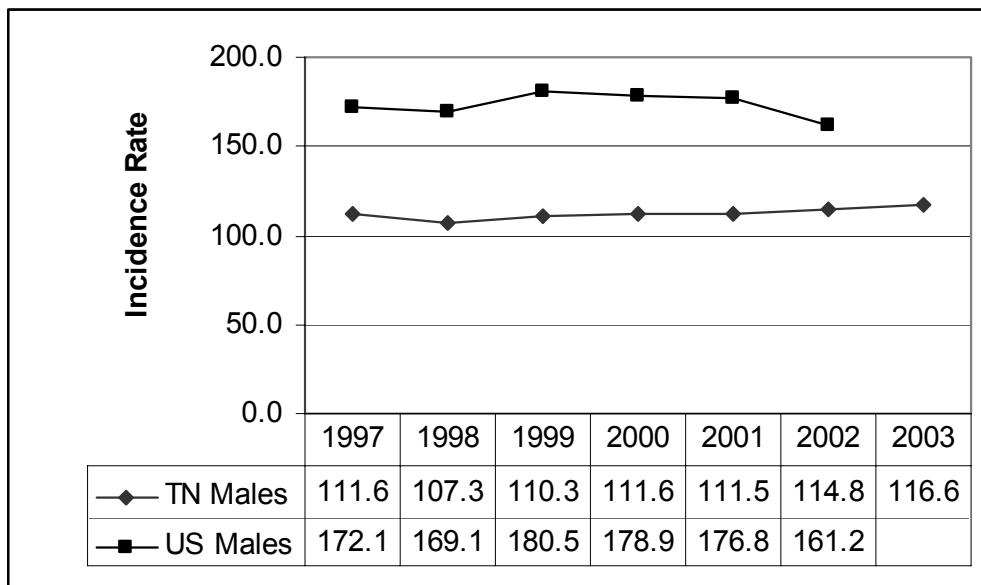
Risk Factors

- Age is the most significant risk factor.
- Race is also prominent as a risk factor. African Americans have the highest prostate cancer incidence in the world. The disease is rare in Asia, Africa, Central America, and South America (ACS, 2003a).
- Having a father or brother with prostate cancer doubles a man's risk for this disease.
- Dietary fat may also be a risk factor (ACS, 2003a).

Prevention

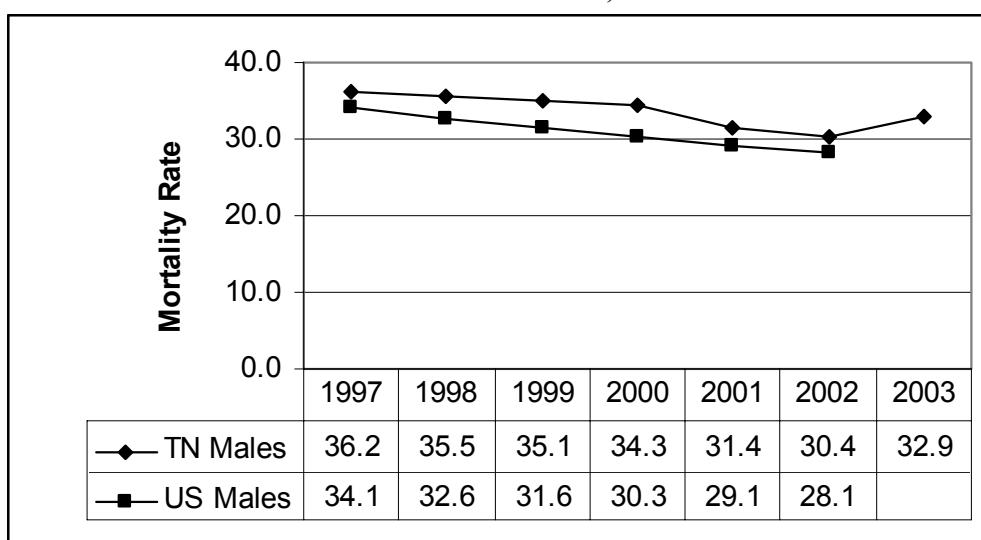
- While options vary regarding routine screening for prostate cancer, the American Cancer Society suggests that men over the age of 50 discuss an annual digital examination and Prostate Specific Antigen test with a health care professional. African American men and men with a family history of prostate cancer should begin screening at age 45.

Figure 16.
Cancer of the Prostate
Incidence Rates, Age-Adjusted*
Tennessee Males 1997-2003, U.S. Males 1997-2002



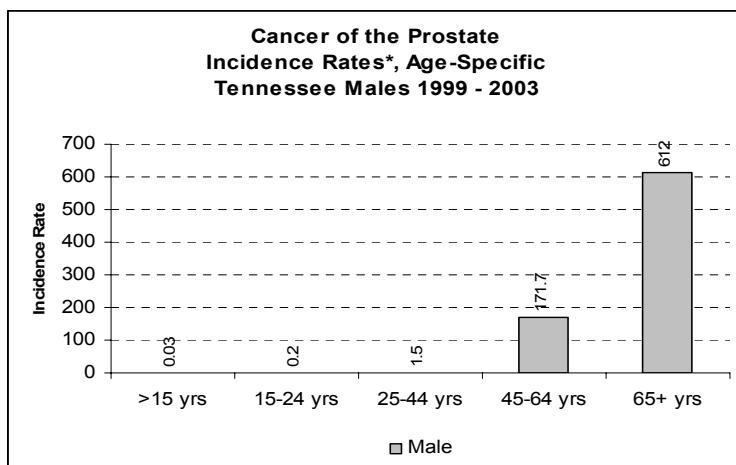
*Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.
U.S. rates are from SEER (Ries et al., 2005).

Figure 17.
Cancer of the Prostate
Mortality Rates, Age-Adjusted*
Tennessee Males 1997-2003, U.S. Males 1997-2002



*Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.
U.S. rates are from SEER (Ries et al., 2005).

Figure 18.



* Five-year average annual rate per 100,000 Tennessee males.

**Table 7. Cancer of the Prostate
Most Frequent Histologies
Tennessee Males 1999 - 2003**

ICD-O Code	Histology	% of Invasive Cases
814	Adenocarcinoma	96.0
800	Malignant Neoplasm	1.7
801	Carcinoma	0.9

**Cancer of the Prostate
Stage of Disease at Diagnosis
Tennessee Males 1999-2003**

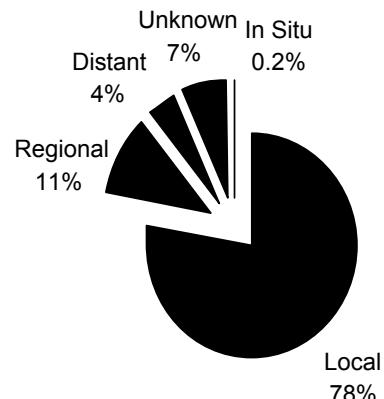
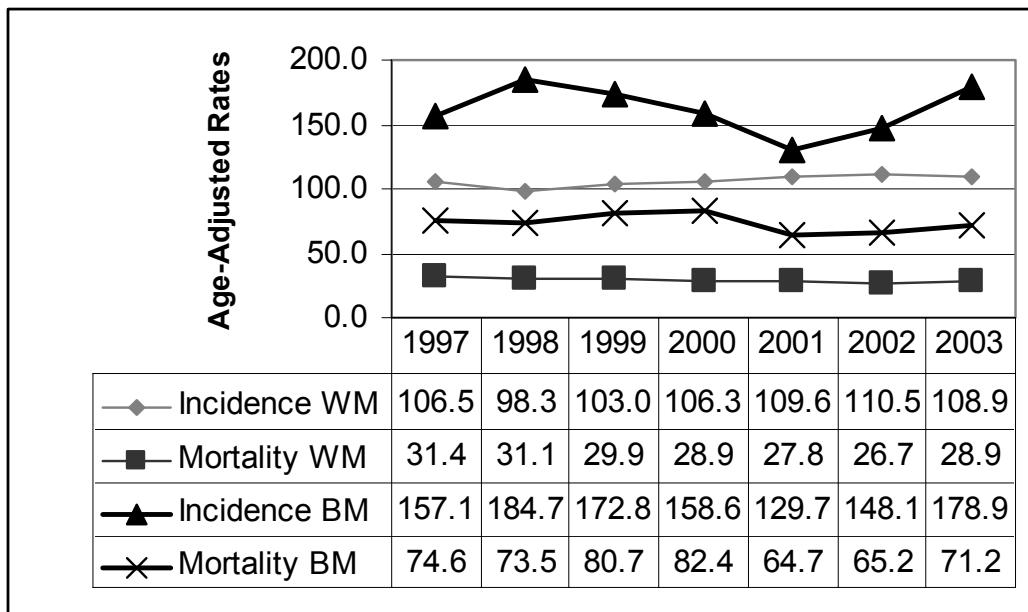


Figure 19.

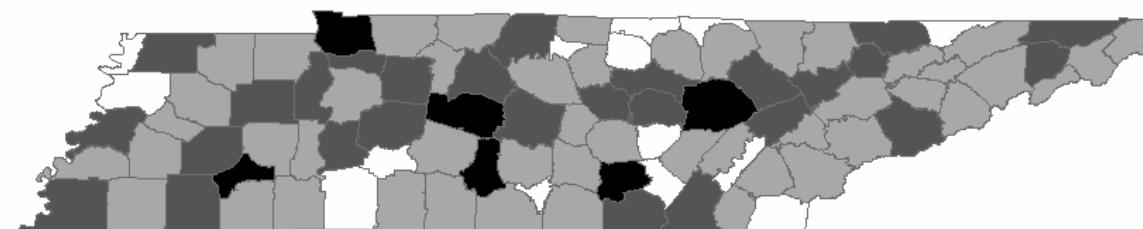
Figure 20. Cancer of the Prostate
White vs. Black, Age-Adjusted*
Incidence and Mortality, 1997 - 2003



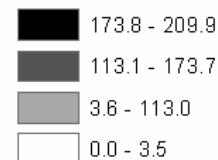
* Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.

Cancer of the Prostate Incidence Rates

By County, Tennessee Males 1999 - 2003



Prostate.Rate



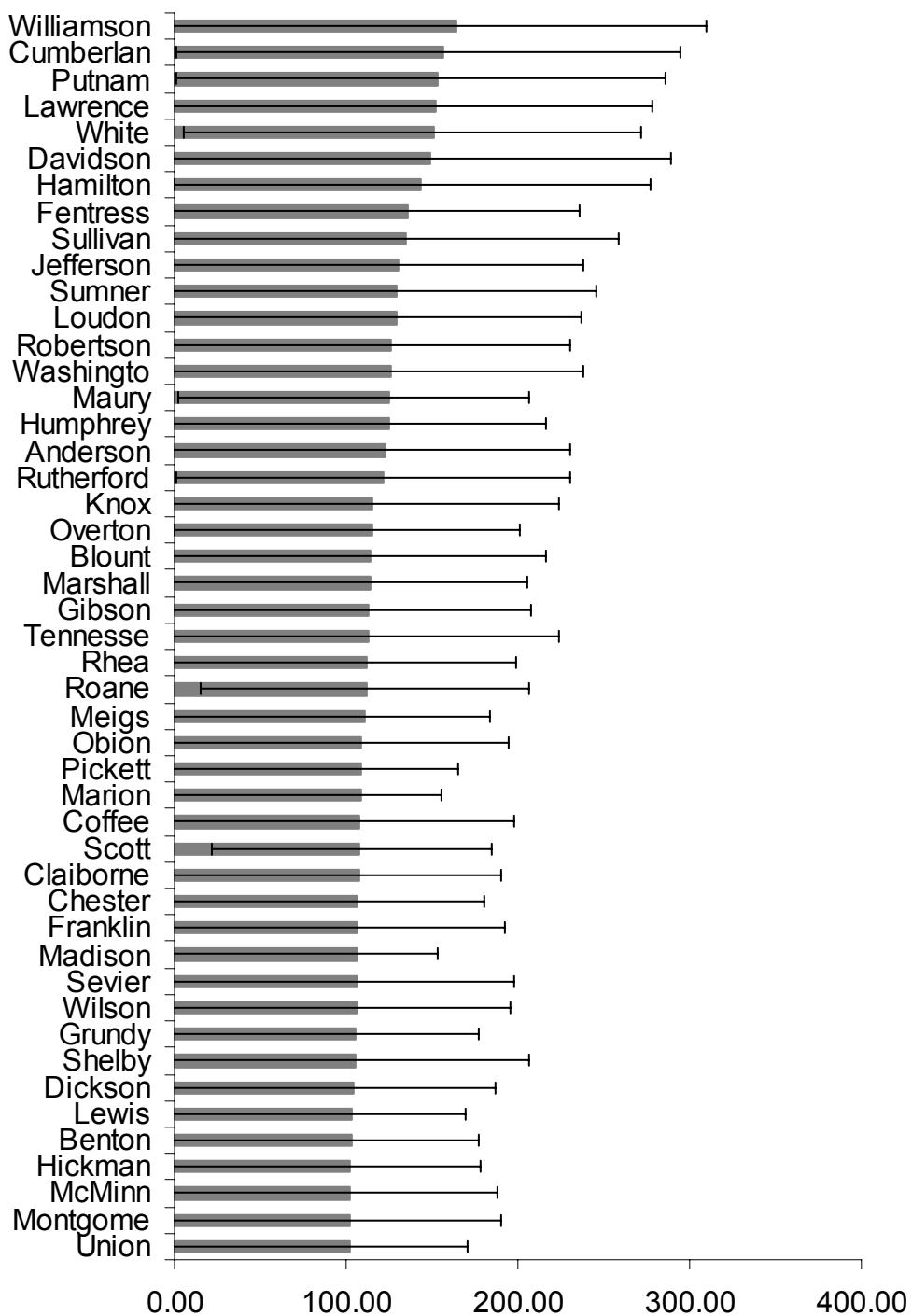
Tennessee Rate: 113.1
U.S. Rate: 173.8[^]

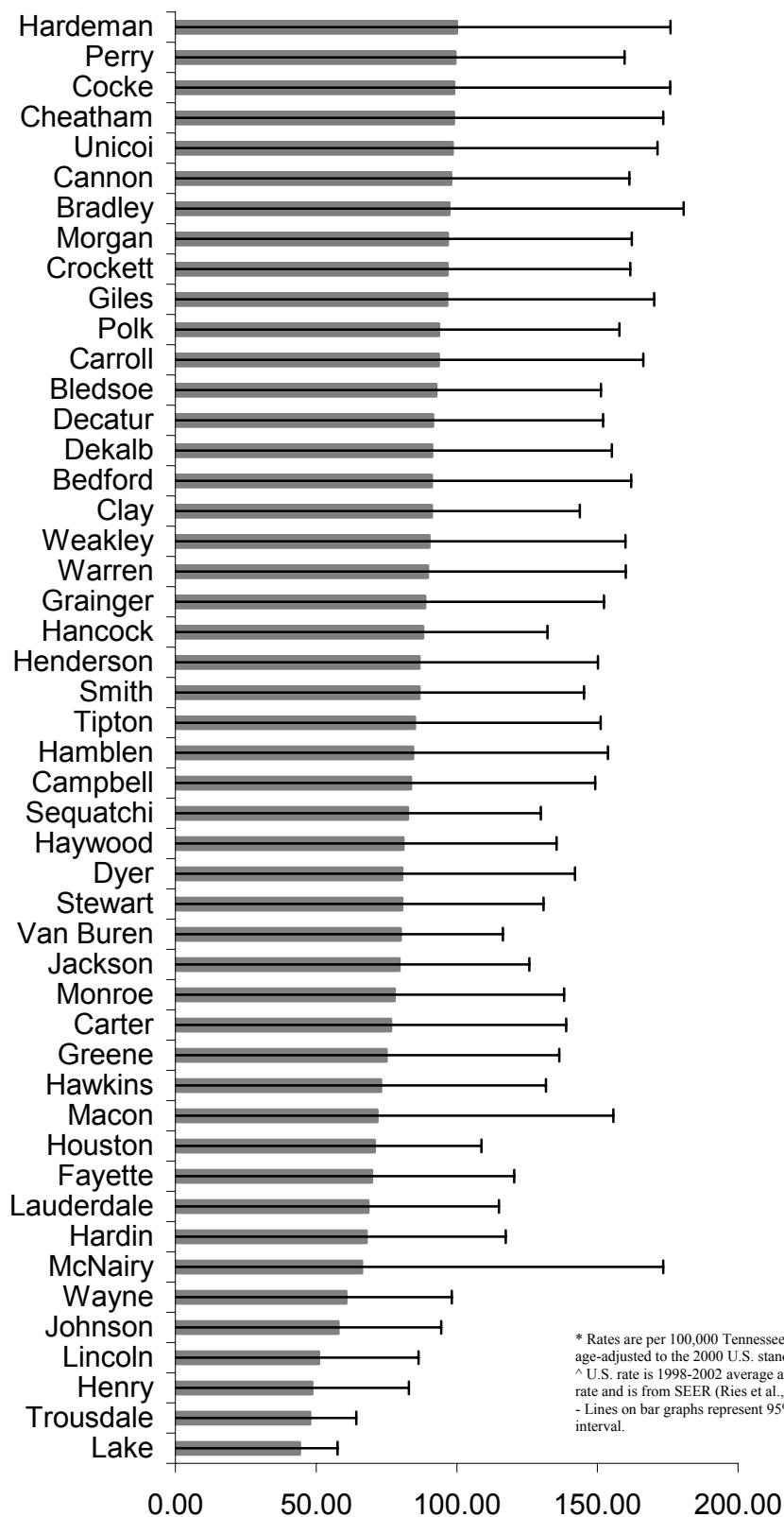
* Five-year average annual rate per 100,000 Tennessee males, age-adjusted to the 2000 U.S. standard population.
[^]U.S. rate is 1998-2002 average annual age-adjusted rate and is from SEER (Ries et al., 2005).

Figure 21.

Figure 22.

Prostate Cancer
Average Annual Incidence Rates by County
Tennessee Males, 1999-2003





* Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.
 ^ U.S. rate is 1998-2002 average annual age-adjusted rate and is from SEER (Ries et al., 2005).
 - Lines on bar graphs represent 95% confidence interval.

Table 8. Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
Prostate All Races 1999-2003 Male

County of Residence	Count	Rate	Significant Difference	
			TN	US [^] (173.8)
Tennessee	14451	113.1	No	Yes
Anderson	242	122.9	No	Yes
Bedford	80	91.1	Yes	Yes
Benton	53	102.9	No	Yes
Bledsoe	30	92.8	No	Yes
Blount	310	114.4	No	Yes
Bradley	196	97.4	Yes	Yes
Campbell	90	83.7	Yes	Yes
Cannon	33	98.0	No	Yes
Carroll	78	93.6	No	Yes
Carter	112	76.7	No	Yes
Cheatham	70	99.0	No	Yes
Chester	39	107.0	No	Yes
Claiborne	79	107.1	No	Yes
Clay	23	91.1	No	Yes
Cocke	82	99.1	No	Yes
Coffee	140	108.0	No	Yes
Crockett	36	96.7	No	Yes
Cumberland	285	156.8	Yes	Yes
Davidson	1603	148.5	Yes	Yes
Decatur	34	91.6	No	Yes
Dekalb	43	91.3	No	Yes
Dickson	102	104.0	No	Yes
Dyer	70	80.6	Yes	Yes
Fayette	53	69.9	Yes	Yes
Fentress	62	135.4	No	Yes
Franklin	113	106.3	No	Yes
Gibson	147	113.2	No	Yes
Giles	71	96.6	No	Yes
Grainger	51	88.8	No	Yes
Greene	126	75.0	Yes	Yes
Grundy	38	105.7	No	Yes
Hamblen	123	84.5	Yes	Yes
Hamilton	1026	143.3	Yes	Yes
Hancock	16	88.0	No	Yes
Hardeman	67	100.1	No	Yes
Hardin	53	68.0	No	Yes
Hawkins	104	73.1	No	Yes
Haywood	36	81.0	No	Yes
Henderson	56	86.7	Yes	Yes
Henry	47	48.6	Yes	Yes
Hickman	58	102.6	No	Yes
Houston	18	70.8	No	Yes
Humphreys	60	124.8	No	Yes
Jackson	24	79.7	No	Yes
Jefferson	148	130.2	No	Yes
Johnson	29	58.0	No	Yes
Knox	982	115.5	No	Yes
Lake	8	44.2	No	Yes
Lauderdale	38	68.6	No	Yes
Lawrence	144	151.9	Yes	No
Lewis	31	103.5	No	Yes
Lincoln	43	51.0	No	Yes
Loudon	160	128.9	No	Yes
McMinn	128	102.0	No	Yes
McNairy	46	66.3	Yes	Yes

County of Residence	Count	Rate	Significant Difference	
			TN	US^ (173.8)
Macon	34	71.8	Yes	Yes
Madison	210	106.3	No	Yes
Marion	74	108.2	No	Yes
Marshall	67	113.8	No	Yes
Maury	193	125.0	No	Yes
Meigs	33	111.2	No	Yes
Monroe	79	77.9	Yes	Yes
Montgomery	212	102.0	No	Yes
Moore	*			
Morgan	41	96.8	No	Yes
Obion	92	108.7	No	Yes
Overton	65	115.0	No	Yes
Perry	25	99.5	No	Yes
Pickett	18	108.7	No	Yes
Polk	42	93.7	No	Yes
Putnam	226	153.0	Yes	Yes
Rhea	81	112.1	No	Yes
Roane	175	111.7	No	Yes
Robertson	135	126.4	No	Yes
Rutherford	371	121.5	No	Yes
Scott	51	107.4	No	Yes
Sequatchie	22	82.7	No	Yes
Sevier	204	106.2	No	Yes
Shelby	1664	105.6	Yes	Yes
Smith	37	86.7	No	Yes
Stewart	28	80.6	Yes	Yes
Sullivan	583	134.9	Yes	No
Sumner	361	129.6	Yes	Yes
Tipton	85	85.1	Yes	Yes
Trousdale	9	47.9	Yes	Yes
Unicoi	56	98.6	No	Yes
Union	40	101.9	No	Yes
Van Buren	13	80.1	No	Yes
Warren	85	89.8	Yes	Yes
Washington	327	125.7	No	Yes
Wayne	27	60.8	Yes	Yes
Weakley	75	90.3	Yes	Yes
White	98	151.0	Yes	No
Williamson	379	163.7	Yes	No
Wilson	192	106.0	No	Yes

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

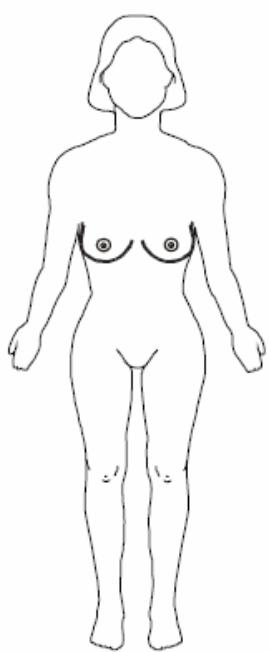
² Counts and rates are suppressed when fewer than 6 cases were reported

[^]U.S. rate is 1998-2002 average annual age-adjusted rate and is from SEER (Ries et al., 2005).

Differences between county rate and TN rate, and county rate and U.S. rate, is tested for statistical significance at the 95% confidence level ($p \leq .05$).

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Cancer of the Female Breast



Cancer of the Female Breast
Incidence and Mortality by Year
Table 9. Tennessee Residents 1997 – 2003

Year	Females			
	New Cases	Incid. Rate	Deaths	Mort. Rate
1997	3503	116.3	851	27.8
1998	3684	120.5	899	28.5
1999	3629	117.1	832	26.1
2000	3772	119.9	857	26.3
2001	3649	114.6	845	25.8
2002	3795	117.4	865	25.9
2003	3743	113.5	931	27.6
99-03	18588	116.5	4330	26.3

Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.

Overview

- Cancer of the breast was the most commonly diagnosed cancer among Tennessee women (almost twice as common during 1999-2003 as any other malignancy) (Figure 4). Each year from 1997 through 2003, approximately 3700 Tennessee women were diagnosed with breast cancer (Table 9).
- The incidence of female breast cancer increased markedly with age. Compared to women aged 25-44 years, those 45-64 were over four times more likely to be diagnosed with breast cancer and those 65 years of age or older were over seven times more likely (Figure 25).
- Of the 1999-2003 Tennessee female breast cancer cases, 63 percent were diagnosed at an early stage (18 percent *in situ* and 45 percent local) (Figure 26). Older women were diagnosed at an earlier stage of disease (62 percent of those aged 45-64, 68 percent of those 65 years of age or older) than were younger women (58 percent of those aged 25-44).
- Approximately 900 Tennessee women died of breast cancer each year from 1997 through 2003 (Table 9). From 1997 to 2003, cancer of the breast was the leading cause of cancer-related deaths among Tennessee women aged 25 to 44 years. For Tennessee women aged 45 to 64 years, it was the second leading cause of cancer mortality (second only to lung cancer) (Table 2).

Risk Factors

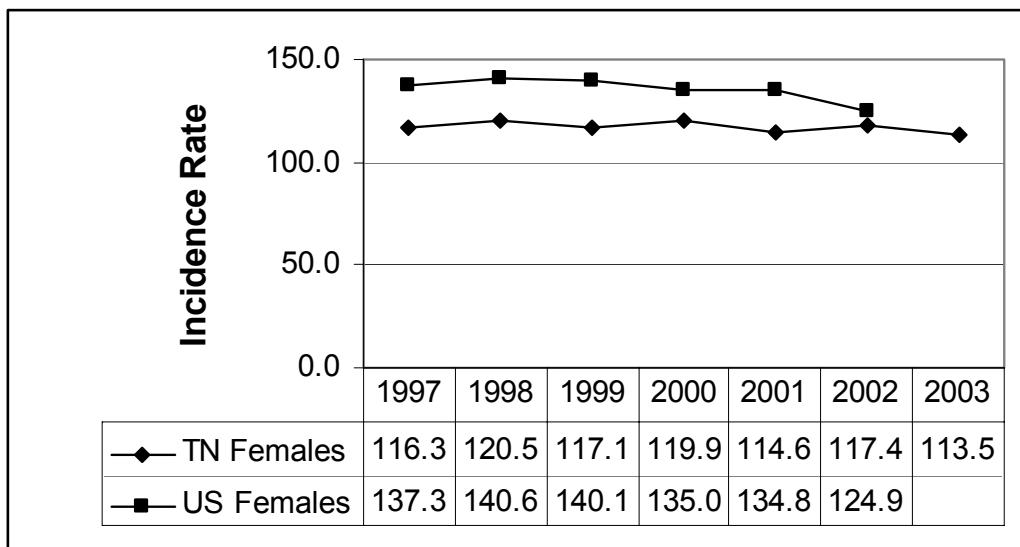
- A personal history of breast cancer or certain family histories of breast cancer increase risk. A history of early menarche, late menopause, no pregnancies or a first pregnancy after the age of 30, consumption of two or more drinks of alcohol per day, and obesity are associated with increased risk. Use of tamoxifen by women at high risk of breast cancer appears to decrease their risk. This cancer is more common among those with higher education and socioeconomic status.

- Although a causal role for dietary factors has not been firmly established, international variability in breast cancer incidence rates suggests dietary factors may play a role in development of this disease. Other factors currently under study include pesticides and other chemical exposures, physical inactivity, alcohol intake and weight gain.

Prevention

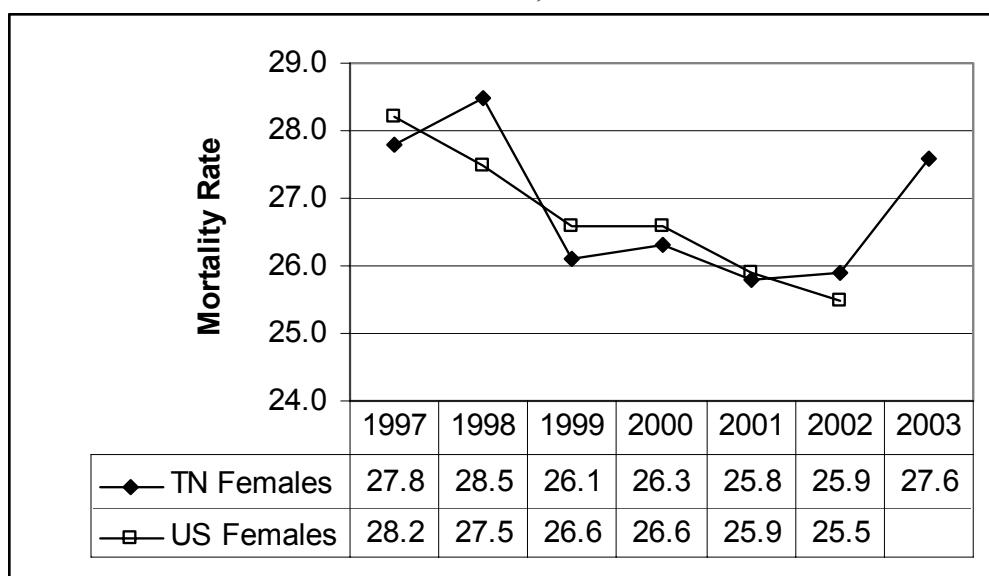
- Currently, the best method of reducing breast cancer mortality is through early detection of disease. While there is some debate about when screening should commence, the current American Cancer Society recommendation is to screen all women 40 years and older on an annual basis (ACS, 2003a).

Figure 23.
Cancer of the Female Breast
Incidence Rates, Age-Adjusted
Tennessee Females 1997-2003, U.S. Females 1997-2002



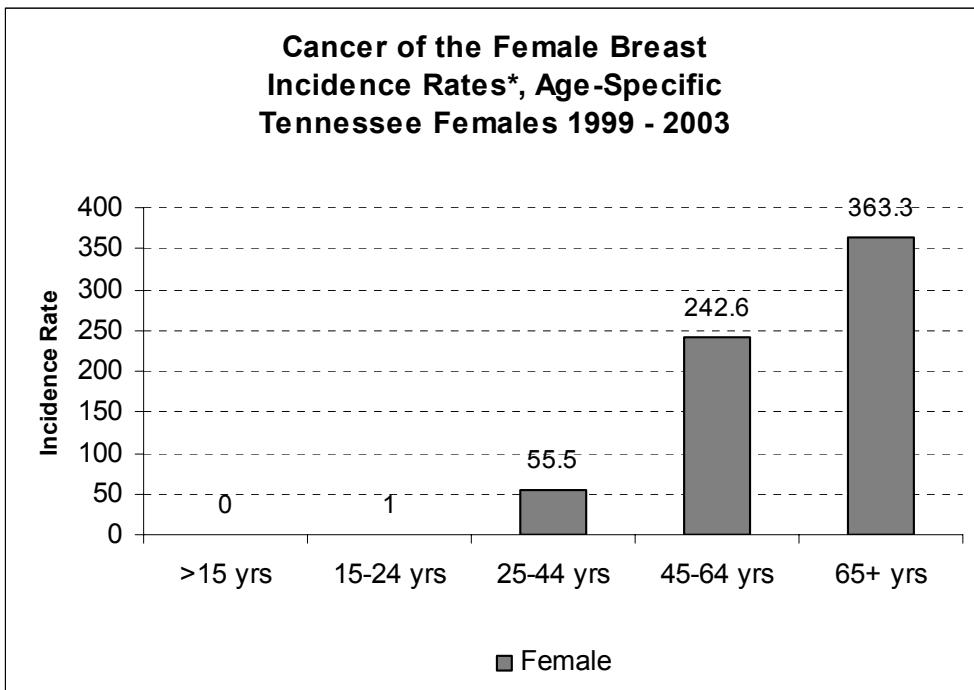
*Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.
U.S. rates are from SEER (Ries et al., 2005).

Figure 24.
Cancer of the Female Breast
Mortality Rates, Age-Adjusted
Tennessee Females 1997-2003, U.S. Females 1997-2002



*Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.
U.S. rates are from SEER (Ries et al., 2005).

Figure 25.



* Five-year average annual rate per 100,000 Tennessee females.

**Table 10. Cancer of the Female Breast
Most Frequent Histologies
Tennessee Females 1999 - 2003**

ICD-O Code	Histology	% of Invasive Cases
850	Duct Cell Carcinoma	68.0
852	Lobular Carcinoma	17.3
801	Carcinoma	3.2
848	Mucinous Adenocarcinoma	2.4
800	Malignant Neoplasm	2.2
814	Adenocarcinoma	1.9
821	Tubular Adenocarcinoma	1.4
851	Medullary Carcinoma	0.7

**Cancer of the Female Breast
Stages of Disease at Diagnosis
Tennessee Females 1999-2003**

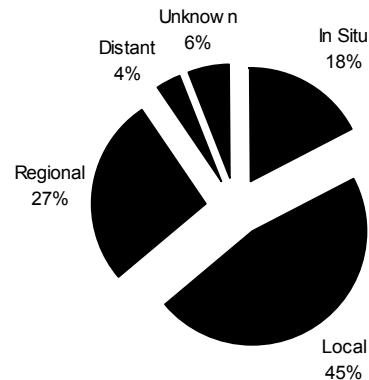
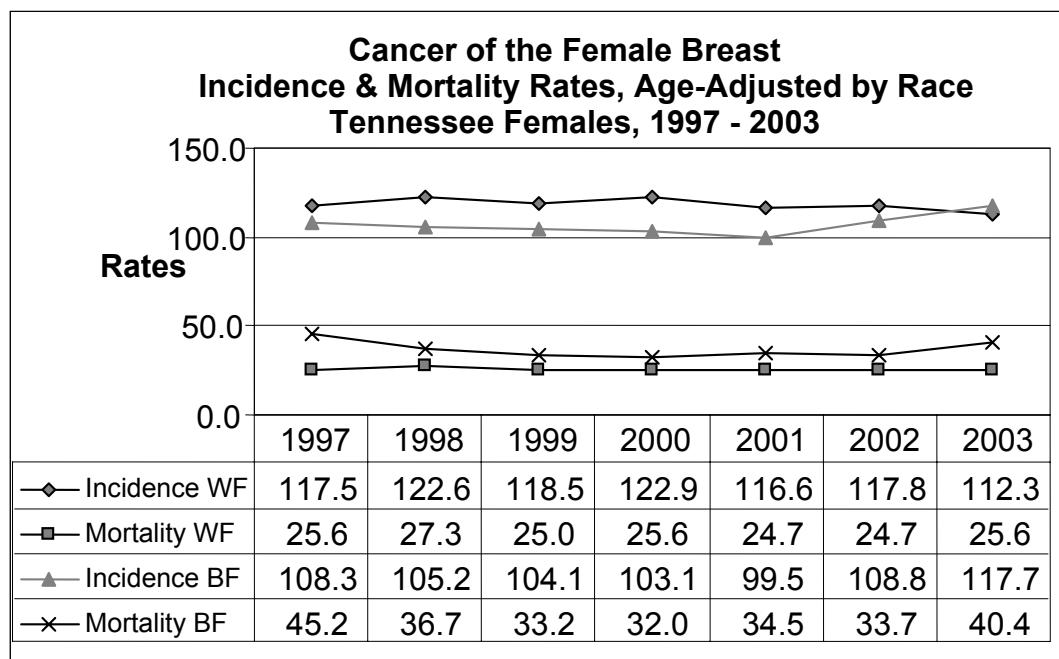


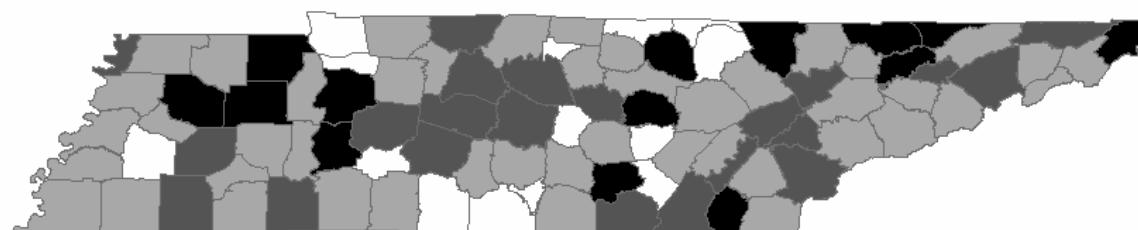
Figure 26.

Figure 27.



Cancer of the Female Breast Incidence Rates

By County, Tennessee Females 1999 - 2003



Breast.Rate

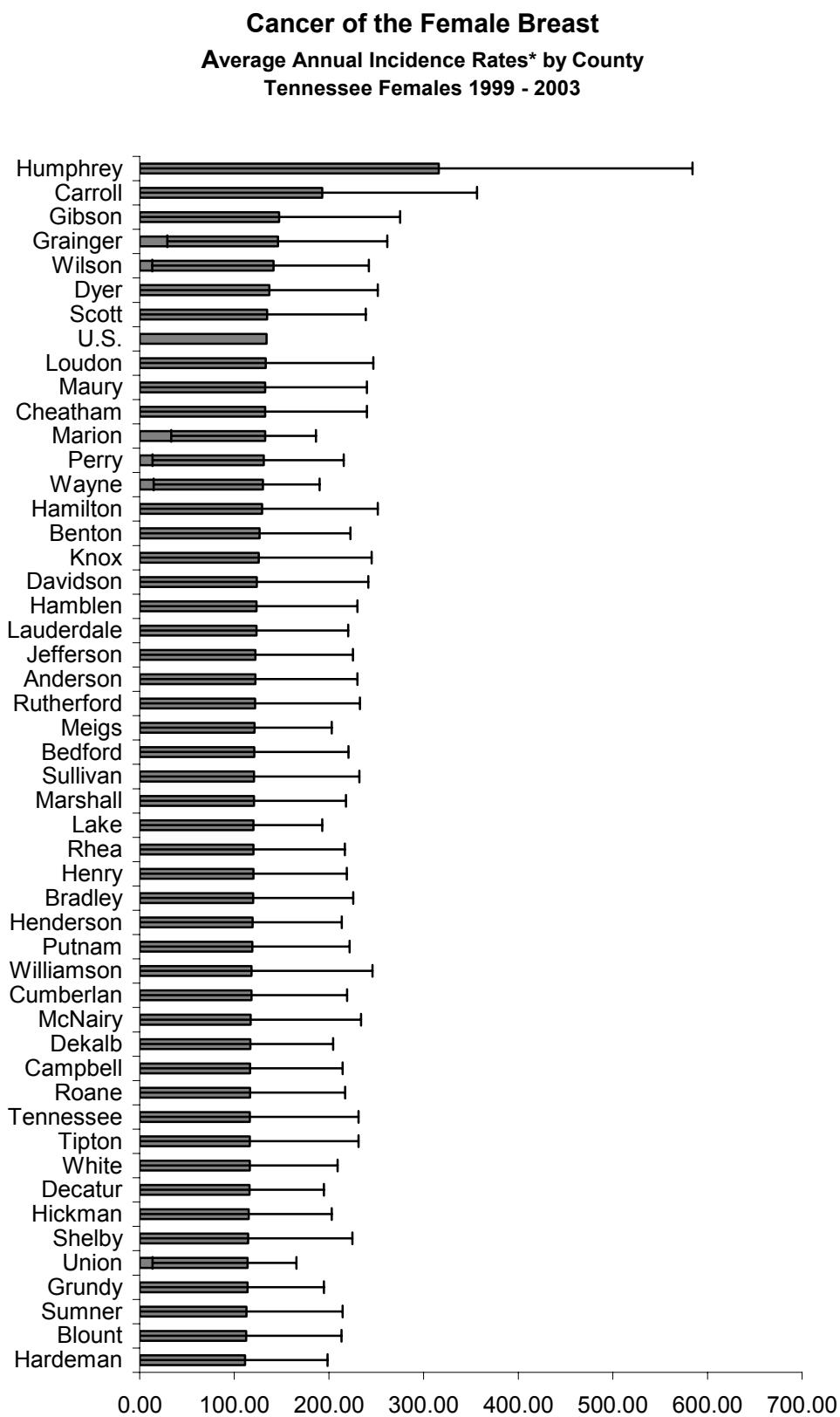


Tennessee Rate: 116.5
U.S. Rate: 134.4^a

^a Five-year average annual rate per 100,000 Tennessee females, age-adjusted to the 2000 U.S. standard population.
^U.S. rate is 1998-2002 average annual age-adjusted rate and is from SEER (Ries et al., 2005).

Figure 28.

Figure 29.



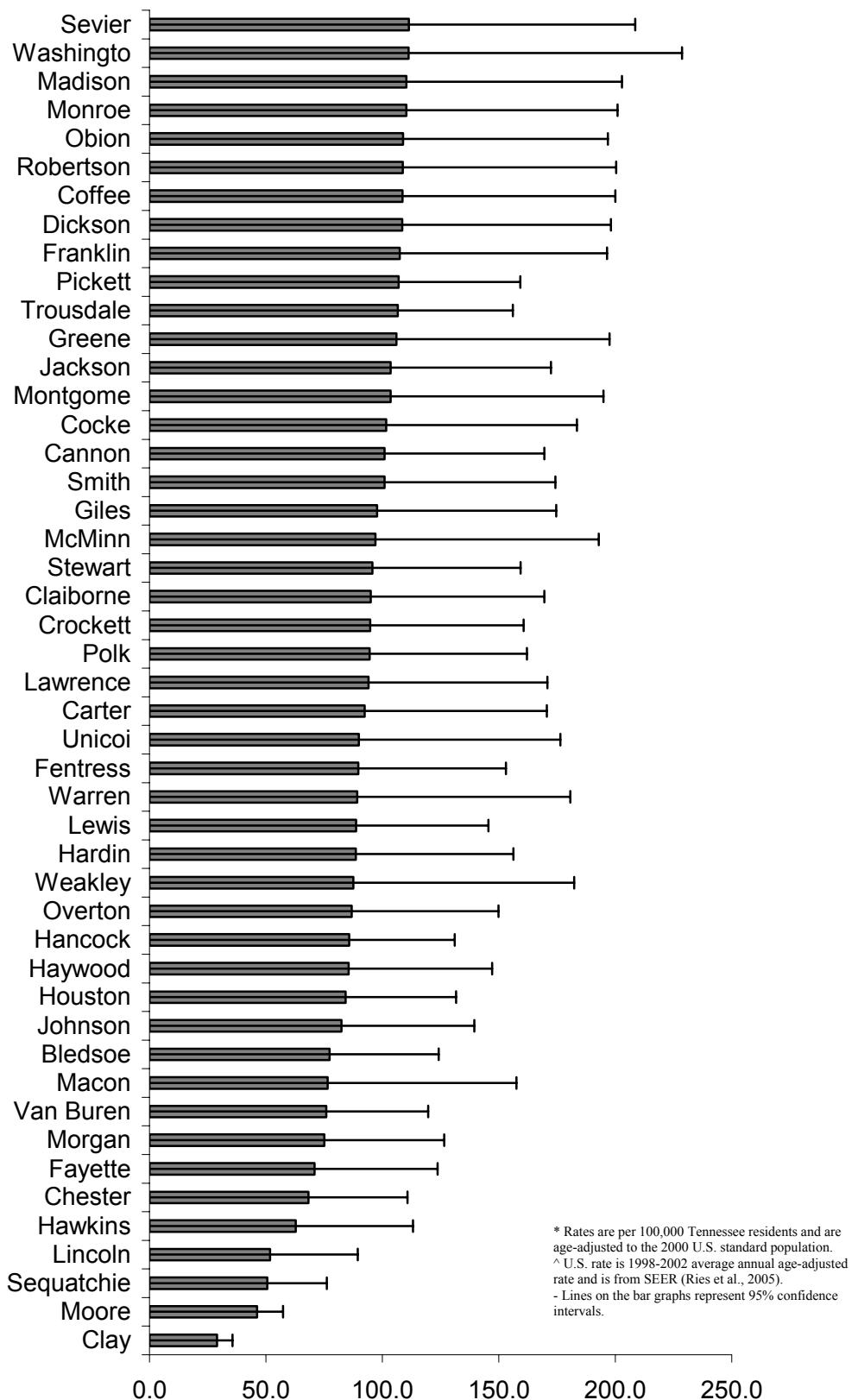


Table 11. Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
 Breast All Races 1999-2003 Female

County of Residence	Count	Rate	TN	Significant Difference
				US [^] (134.4)
Tennessee	18588	116.5	No	Yes
Anderson	292	122.2	No	No
Bedford	123	121.1	No	No
Benton	69	126.8	No	No
Bledsoe	25	77.4	Yes	Yes
Blount	369	112.5	No	Yes
Bradley	293	119.8	No	No
Campbell	147	116.8	No	No
Cannon	38	101.0	No	Yes
Carroll	173	193.0	Yes	Yes
Carter	166	92.4	Yes	Yes
Cheatham	113	132.5	No	No
Chester	28	68.2	Yes	Yes
Claiborne	84	95.0	Yes	Yes
Clay	7	29.0	Yes	Yes
Cocke	104	101.6	No	Yes
Coffee	157	108.6	No	No
Crockett	43	94.8	No	Yes
Cumberland	205	118.1	No	No
Davidson	1860	123.6	No	Yes
Decatur	40	116.0	No	No
Dekalb	63	116.9	No	No
Dickson	128	108.5	No	Yes
Dyer	146	137.0	No	No
Fayette	60	70.9	Yes	Yes
Fentress	46	89.7	No	Yes
Franklin	133	107.5	No	Yes
Gibson	233	147.4	Yes	Yes
Giles	87	97.8	Yes	No
Grainger	88	146.2	No	No
Greene	213	106.0	No	Yes
Grundy	47	114.0	No	Yes
Hamblen	216	123.4	No	Yes
Hamilton	1214	129.4	Yes	No
Hancock	18	85.8	No	Yes
Hardeman	81	111.5	No	No
Hardin	72	88.6	Yes	Yes
Hawkins	100	62.8	Yes	Yes
Haywood	50	85.6	Yes	Yes
Henderson	91	119.2	No	No
Henry	127	120.2	No	No
Hickman	69	115.2	No	No
Houston	21	84.2	No	Yes
Humphreys	170	316.1	Yes	Yes
Jackson	35	103.6	No	No
Jefferson	157	122.3	No	No
Johnson	42	82.5	Yes	No
Knox	1368	125.8	No	Yes
Lake	26	120.3	No	No
Lauderdale	87	123.3	No	No
Lawrence	116	94.1	Yes	Yes
Lewis	30	88.7	No	Yes
Lincoln	53	51.8	Yes	Yes
Loudon	183	133.3	No	No

County of Residence	Count	Rate	Significant Difference	
			TN	US^ (134.4)
McMinn	146	97.0	No	No
McNairy	91	117.4	No	No
Macon	44	76.5	Yes	Yes
Madison	274	110.3	No	Yes
Marion	110	132.5	No	No
Marshall	91	120.8	No	No
Maury	257	132.7	No	No
Meigs	37	121.3	No	No
Monroe	124	110.3	No	Yes
Montgomery	286	103.5	Yes	Yes
Moore	7	46.2	Yes	Yes
Morgan	39	75.1	Yes	Yes
Obion	108	108.9	No	Yes
Overton	53	86.8	Yes	Yes
Perry	32	131.1	No	No
Pickett	16	107.0	No	No
Polk	48	94.6	No	Yes
Putnam	208	119.1	No	No
Rhea	101	120.3	No	No
Roane	204	116.6	No	Yes
Robertson	154	108.8	No	No
Rutherford	470	122.0	No	Yes
Scott	77	134.6	No	No
Sequatchie	16	50.6	Yes	Yes
Sevier	237	111.4	No	Yes
Shelby	2594	114.6	No	No
Smith	52	101.0	No	Yes
Stewart	35	95.7	No	Yes
Sullivan	614	120.9	No	Yes
Sumner	399	112.9	No	Yes
Tipton	138	106.6	No	Yes
Trousdale	19	89.9	No	No
Unicoi	70	114.1	No	No
Union	37	75.9	Yes	Yes
Van Buren	15	89.2	Yes	No
Warren	124	111.3	No	Yes
Washington	411	130.1	Yes	No
Wayne	40	87.6	Yes	Yes
Weakley	115	116.4	Yes	No
White	85	118.2	No	Yes
Williamson	438	141.5	No	No
Wilson	266	114.4	No	Yes

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

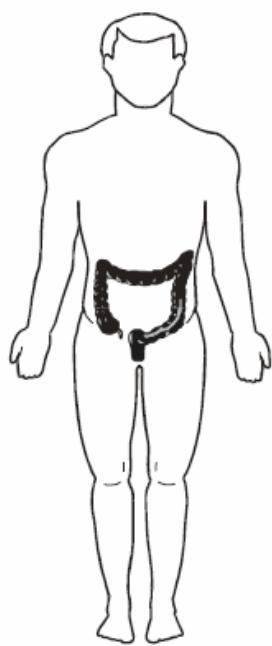
² Counts and rates are suppressed when fewer than 6 cases were reported

[^]U.S. rate is 1998-2002 average annual age-adjusted rate and is from SEER (Ries et al., 2005).

Differences between county rate and TN rate, and county rate and U.S. rate, is tested for statistical significance at the 95% confidence level ($p \leq .05$).

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Cancer of the Colon and Rectum



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Cancer of the Colon and Rectum
Incidence and Mortality by Sex and Year
Table 12. Tennessee Residents 1997 – 2003

Year	Total				Males				Females			
	New Cases	Incid. Rate	Deaths	Mort. Rate	New Cases	Incid. Rate	Deaths	Mort. Rate	New Cases	Incid. Rate	Deaths	Mort. Rate
1997	2603	48.1	1,217	22.8	1320	59.3	590	27.5	1283	40.8	627	19.3
1998	2766	50.1	1,180	21.6	1363	58.9	587	26.8	1403	44.0	593	18.1
1999	2623	46.8	1,071	19.4	1310	55.2	570	17.2	1313	40.7	501	22.7
2000	2729	48.2	1,238	22.1	1394	58.0	606	26.9	1335	40.9	632	19.0
2001	2748	47.7	1,244	21.8	1380	56.8	640	27.8	1368	41.4	604	17.9
2002	2724	46.6	1,143	19.8	1369	55.1	595	25.6	1355	40.4	548	15.8
2003	2937	49.5	1,207	20.5	1466	58.8	607	25.7	1471	43.2	600	17.0
99-03	13761	47.8	5,903	20.8	6919	56.8	2949	25.8	6842	41.3	2954	17.4

Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.

Overview

- During 1999-2003, cancer of the colon and rectum was the third most common primary cancer diagnosed in both Tennessee men and women (Figures 3 and 4).
- Incidence increased markedly with age. Colorectal cancer was over four times more common among those aged 65 and older compared to individuals aged 45-64 years (Figure 32).
- Among colorectal cancer cases during 1999-2003, 34 percent were diagnosed at an in situ or local stage. Forty-three percent were found at a regional stage and 15 percent at a distant stage. Stage was not reported in 8 percent of cases (Figure 33).
- Cancer of the colon and rectum was the third leading cause of cancer-related mortality among both men and women in Tennessee during 1999-2003 (Figures 3 and 4). It accounted for about 10 percent of all cancer-related deaths.

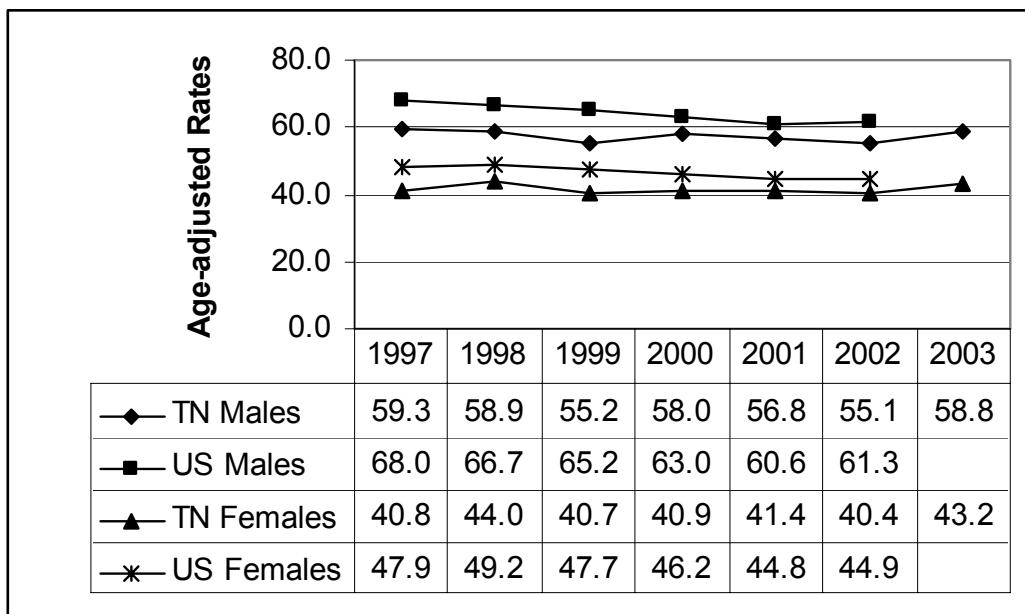
Risk Factors

- A personal or family history of colorectal cancer, certain types of polyps, or inflammatory bowel disease is associated with increased risk.
- A diet high in fat and/or low in fiber, as well as physical inactivity, may be associated with increased risk malignancy.
- Recent studies suggest that estrogen replacement therapy and non-steroidal anti-inflammatory drugs such as aspirin may reduce risk.

Prevention

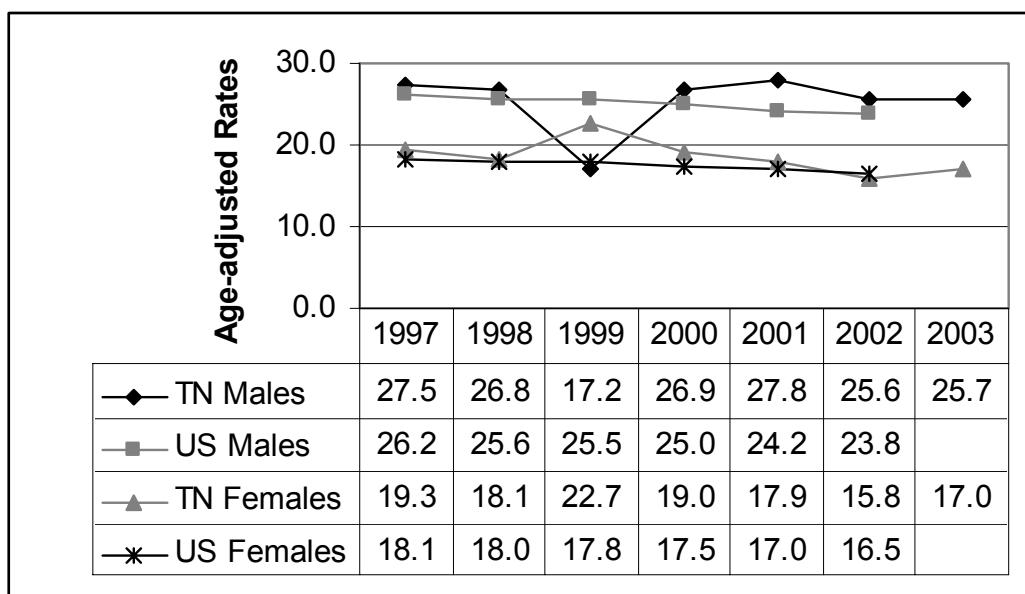
- The American Cancer Society recommends an annual fecal occult blood test beginning at age 50, plus either flexible sigmoidoscopy or other studies on a periodic basis. Although screening for colon cancer is clearly beneficial, studies are still in progress to identify the most practical and effective approach to prevent this disease.

Figure 30.
 Cancer of the Colon & Rectum
 Incidence Rates*, Age-Adjusted
 Tennessee Residents 1997 – 2003, U.S. Residents 1997 - 2002



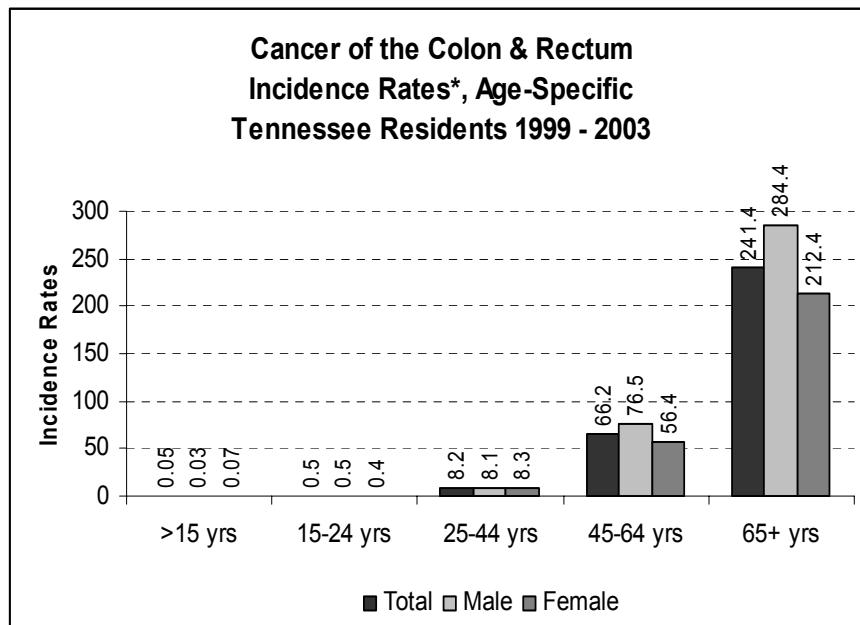
*Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.
 U.S. rates are from SEER (Ries et al., 2005).

Figure 31.
 Cancer of the Colon & Rectum
 Mortality Rates*, Age-Adjusted
 Tennessee Residents 1997 – 2003, U.S. Residents 1997 - 2002



*Rates are per 100,000 Tennessee residents and are age-adjusted to the 2000 U.S. standard population.
 U.S. rates are from SEER (Ries et al., 2005).

Figure 32.



* Five-year average annual rate per 100,000 Tennessee residents.

**Table 13. Cancer of the Colon & Rectum
Most Frequent Histologies
Tennessee Residents, 1999 - 2003**

ICD-O Code	Histology	% of Invasive Cases
814	Adenocarcinoma	73.1
826	Adenocarcinoma (Papillary or in Villous Adenoma)	8.6
848	Mucinous Adenocarcinoma	8.3
821	Tubular Adenocarcinoma	3.0
800	Malignant Neoplasm	1.8
801	Carcinoma	1.4
824	Carcinoid Tumor	1.6

**Cancer of the Colon & Rectum
Stages of Disease at Diagnosis
Tennessee Males and Females, 1999-2003**

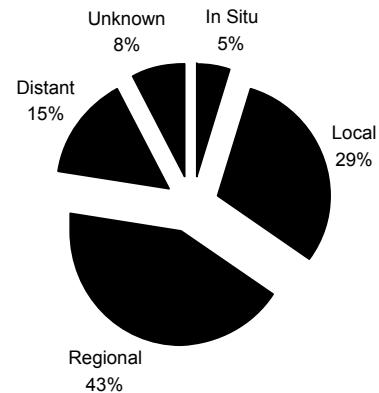
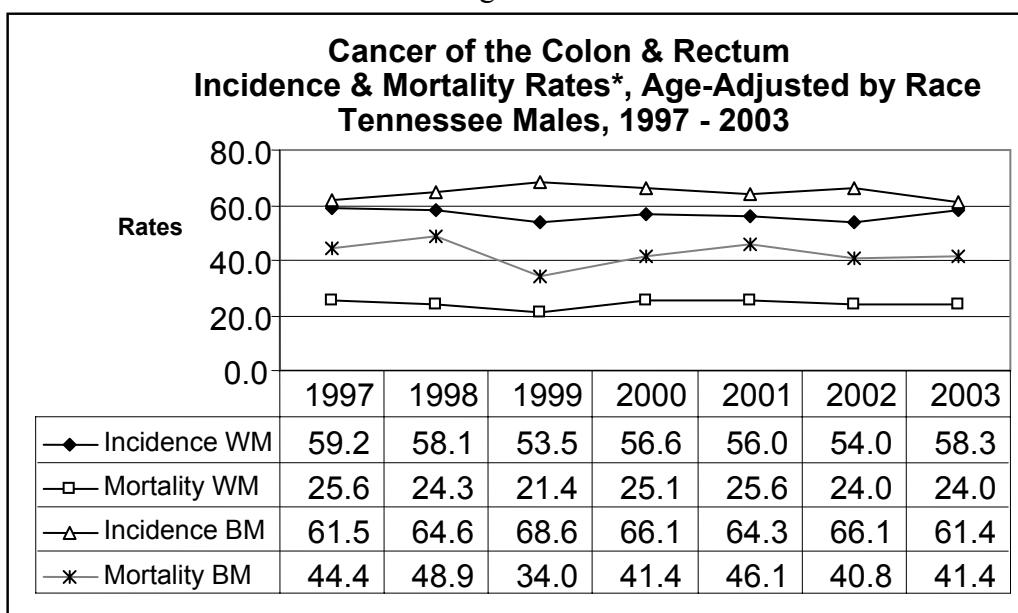


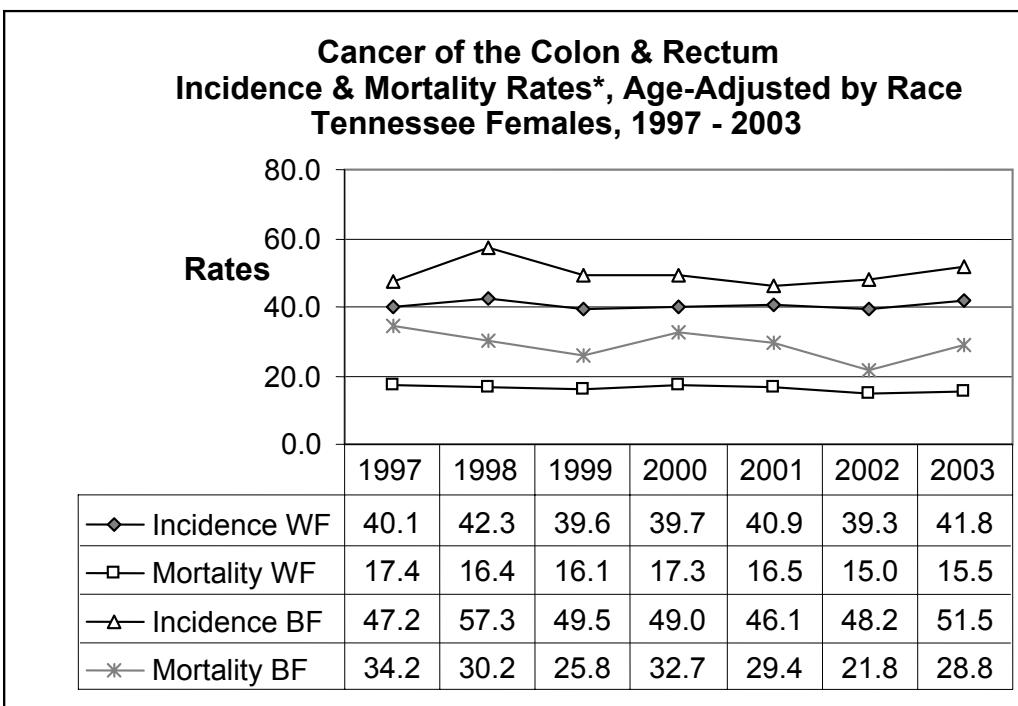
Figure 33.

Figure 34.



* Rates are per 100,000 Tennessee males and are age-adjusted to the 2000 U.S. standard population.

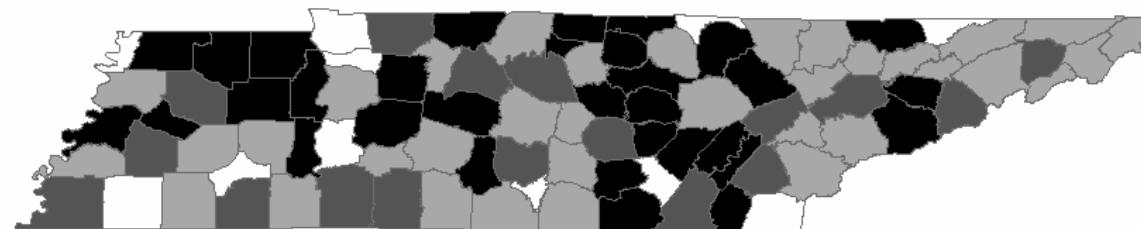
Figure 35.



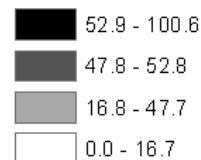
* Rates are per 100,000 Tennessee females and are age-adjusted to the 2000 U.S. standard population.

Cancer of the Colon and Rectum Incidence Rates

By County, Tennessee Males & Females 1999-2003



CRC.Rate



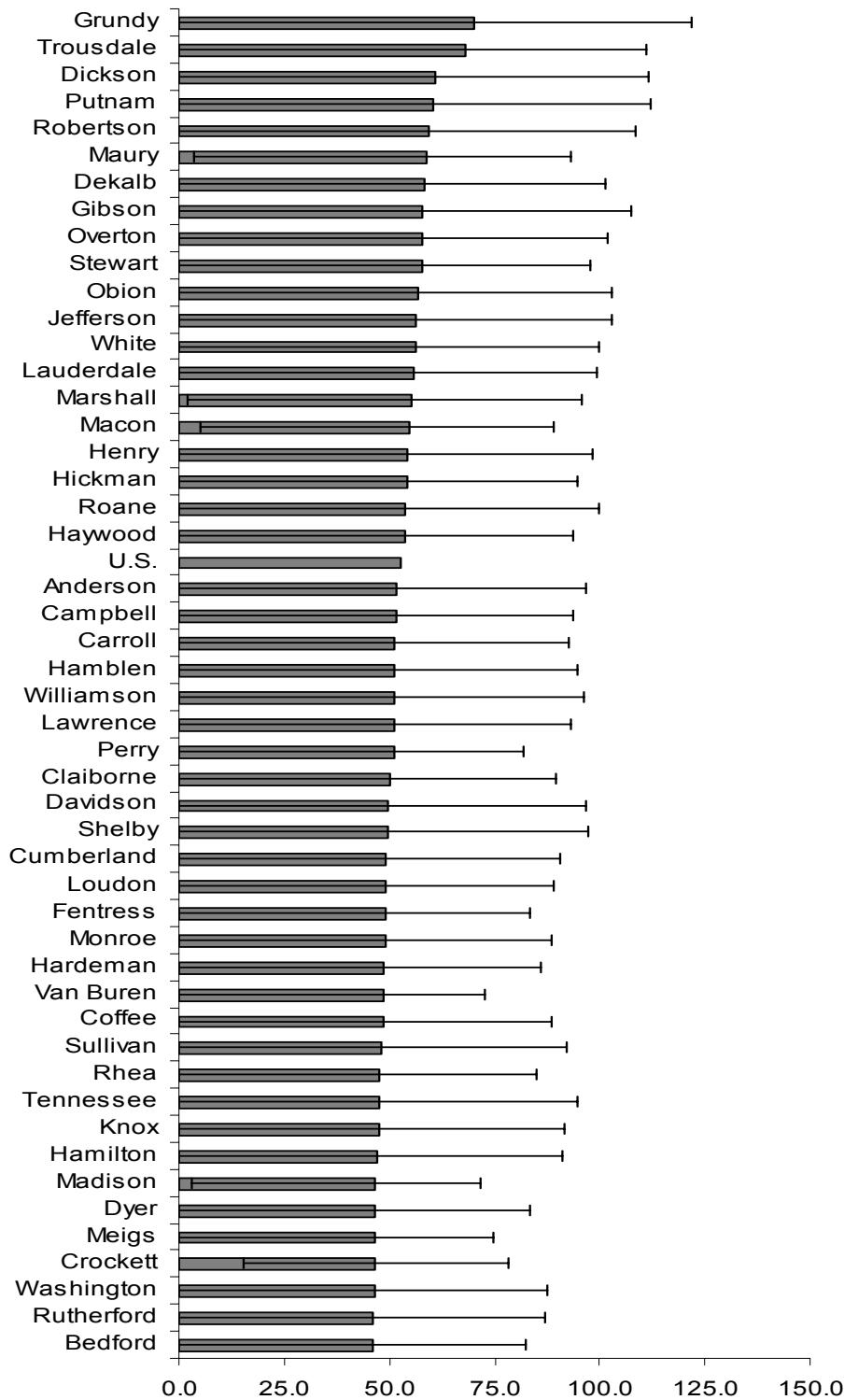
Tennessee Rate: 47.8
U.S. Rate: 52.9^a

^a Five-year average annual rate per 100,000 Tennessee males & females, age-adjusted to the 2000 U.S. standard population.
^b U.S. rate is 1998-2002 average annual age-adjusted rate and is from SEER (Ries et al., 2005).

Figure 36.

Figure 37.

Cancer of the Colon & Rectum
Average Annual Incidence Rates* by County
Tennessee Residents 1999 - 2003



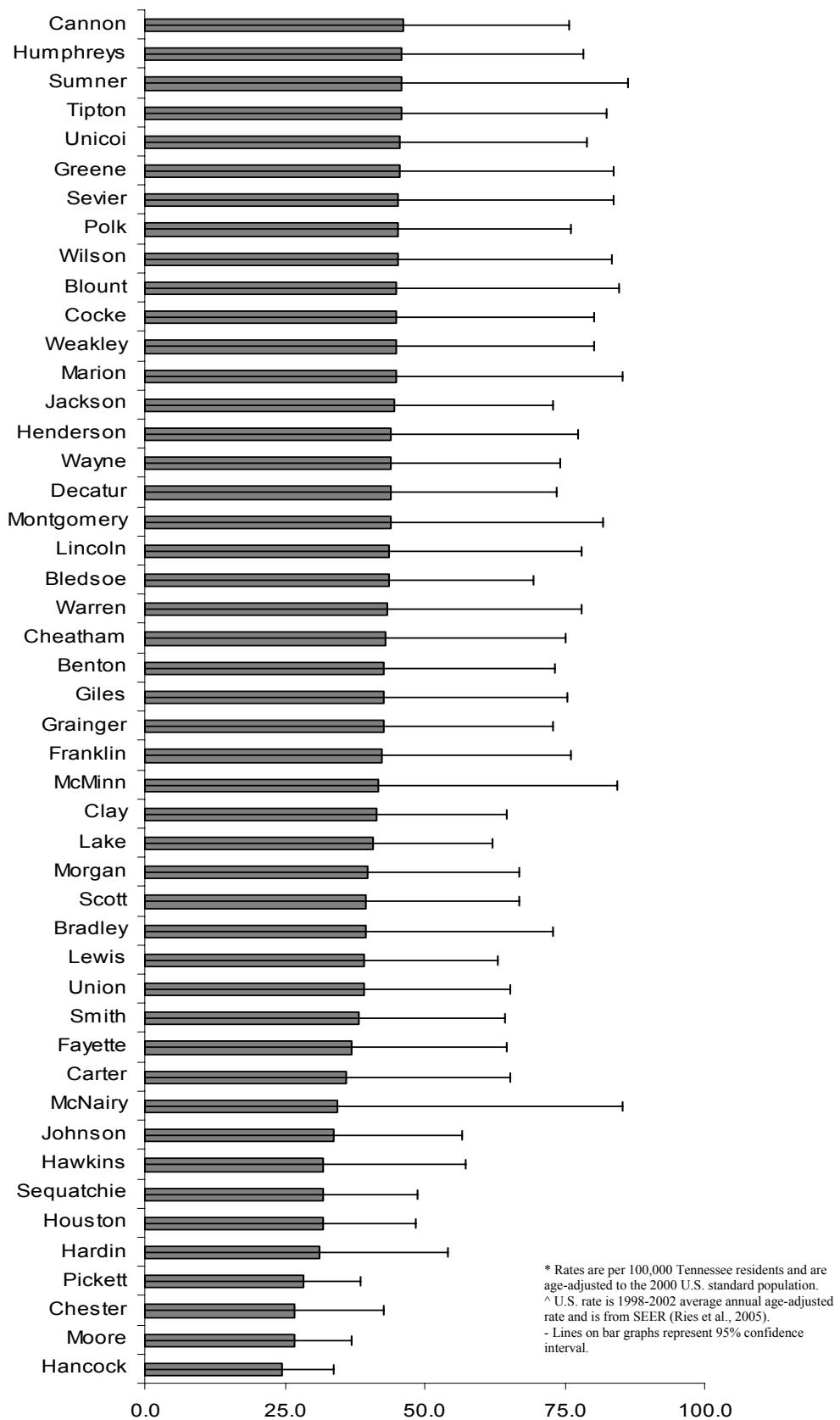


Table 14. Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
Colon (incl. rectum) All Races All Genders 1999-2003

County of Residence	Count	Rate	Significant Difference	
			TN	US^ (52.9)
Tennessee	13761	47.8	No	Yes
Anderson	233	51.8	No	No
Bedford	88	46.1	No	No
Benton	48	42.8	No	No
Bledsoe	25	43.5	No	No
Blount	272	45.0	No	Yes
Bradley	172	39.5	Yes	Yes
Campbell	123	51.5	No	No
Cannon	31	46.1	No	No
Carroll	100	51.4	No	No
Carter	121	35.9	Yes	Yes
Cheatham	62	43.1	No	Yes
Chester	22	26.9	Yes	Yes
Claiborne	83	50.2	No	No
Clay	21	41.3	No	No
Cocke	84	45.0	No	No
Coffee	134	48.4	No	No
Crockett	40	46.4	No	No
Cumberland	173	49.2	No	No
Davidson	1299	49.8	No	No
Decatur	38	43.9	No	No
Dekalb	57	58.3	Yes	No
Dickson	128	61.1	Yes	No
Dyer	93	46.6	No	No
Fayette	59	37.1	Yes	Yes
Fentress	46	49.0	No	No
Franklin	95	42.3	No	Yes
Gibson	181	58.0	Yes	No
Giles	73	42.6	No	No
Grainger	47	42.6	No	Yes
Greene	169	45.4	No	No
Grundy	57	70.2	Yes	No
Hamblen	162	51.4	No	No
Hamilton	800	47.3	No	Yes
Hancock	10	24.6	Yes	Yes
Hardeman	70	48.8	No	No
Hardin	52	31.3	Yes	Yes
Hawkins	93	32.0	Yes	Yes
Haywood	56	53.8	No	No
Henderson	63	44.1	No	No
Henry	112	54.3	No	No
Hickman	60	54.3	No	No
Houston	17	31.7	Yes	Yes
Humphreys	48	45.8	No	No
Jackson	29	44.7	No	No
Jefferson	133	56.3	No	No
Johnson	36	33.9	Yes	Yes
Knox	927	47.4	No	Yes
Lake	17	40.7	No	No
Lauderdale	75	56.0	No	No
Lawrence	115	51.3	No	No
Lewis	25	39.2	No	No
Lincoln	82	43.7	No	No
Loudon	121	49.1	No	No
McMinn	116	41.8	No	Yes
McNairy	53	34.3	Yes	Yes

County of Residence	Count	Rate	Significant Difference	
			TN	US^ (52.9)
Macon	58	54.7	No	No
Madison	211	46.8	No	No
Marion	68	44.8	No	No
Marshall	75	55.1	No	No
Maury	202	59.1	Yes	No
Meigs	26	46.5	No	No
Monroe	106	49.0	No	No
Montgomery	204	43.9	No	Yes
Moore	10	26.8	Yes	Yes
Morgan	38	39.8	No	No
Obion	109	56.9	No	No
Overton	69	57.9	No	No
Perry	24	51.2	No	No
Pickett	10	28.3	Yes	Yes
Polk	40	45.1	No	No
Putnam	195	60.2	Yes	No
Rhea	77	47.8	No	No
Roane	175	54.0	No	No
Robertson	147	59.2	Yes	No
Rutherford	297	46.2	No	Yes
Scott	40	39.6	No	No
Sequatchie	18	31.8	Yes	Yes
Sevier	172	45.3	No	No
Shelby	1891	49.7	No	Yes
Smith	37	38.3	No	Yes
Stewart	41	57.9	No	No
Sullivan	457	48.3	No	No
Sumner	282	45.8	No	Yes
Tipton	102	45.8	No	No
Trousdale	28	68.2	No	No
Unicoi	55	45.6	No	No
Union	36	39.2	No	No
Van Buren	15	48.7	No	No
Warren	91	43.4	No	No
Washington	276	46.4	No	No
Wayne	40	44.0	No	No
Weakley	86	44.9	No	No
White	78	56.3	No	No
Williamson	247	51.4	No	No
Wilson	181	45.1	No	Yes

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 cases were reported

[^]U.S. rate is 1998-2002 average annual age-adjusted rate and is from SEER (Ries et al., 2005).

Differences between county rate and TN rate, and county rate and U.S. rate, is tested for statistical significance at the 95% confidence level ($p \leq .05$).

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VI. Appendices

Appendix A: Reporting Health Care Facilities

Appendix B: Tennessee Population Denominators for Age-adjusted Calculations

Appendix C: Centers for Disease Control and Prevention, National Program of Cancer Registries Program Standards

Appendix D: Tables.

Table 15. All Cancer, All Races 1999-2003 Incidence Males

Table 16. All Cancer, All Races 1999-2003 Incidence Females

Table 17. All Cancer All Races 1999-2003 Mortality Males

Table 18. All Cancer, All Races 1999-2003 Mortality Females

Table 19. Lung and Bronchus, All Races 1999-2003 Incidence Males

Table 20. Lung and Bronchus, All Races 1999-2003 Incidence Females

Table 21. Lung and Bronchus, All Races 1999-2003 Mortality Males

Table 22. Lung and Bronchus, All Races 1999-2003 Mortality Females

Table 23. Prostate, 1999-2003 Incidence White Males

Table 24. Prostate, 1999-2003 Mortality White Males

Table 25. Prostate, 1999-2003 Incidence Black Males

Table 26. Prostate, 1999-2003 Mortality Black Males

Table 27. Breast, 1999-2003 Incidence White Females

Table 28. Breast, 1999-2003 Mortality White Females

Table 29. Breast, 1999-2003 Incidence Black Females

Table 30. Breast, 1999-2003 Mortality Black Females

Table 31. Colorectal, All Races 1999-2003 Incidence Males

Table 32. Colorectal, All Races 1999-2003 Incidence Females

Table 33. Colorectal, All Races 1999-2003 Mortality Males

Table 34. Colorectal, All Races 1999-2003 Mortality Females

Appendix A.

Reporting Health Care Facilities:

Adult and Pediatric Dermatology of Tullahoma PC
Advanced Family Surgery Center
Affiliated Dermatologists Green Hills PC
Alvin H. Meyer, Jr., MD PC
Ambulatory Surgical Center of Wartburg American Endoscopy Center, P.C.
Anatomic Pathology Lab of Winchester Anatomic Pathology Laboratory of Nashville
Associated Endoscopy
Associates FO Memorial/Mission Outpatient Surgery Center
Associates in Pathology
Athens Regional Medical Center Atrium Memorial Surgery Center
Baptist Ambulatory Surgery Center
Baptist Dekalb Hospital
Baptist Germantown Surgery Center
Baptist Hickman Community Hospital
Baptist Hospital
Baptist Hospital for Women
Baptist Hospital of Cocke County
Baptist Hospital of East Tennessee
Baptist Hospital West
Baptist Hospital West Laboratory
Baptist Memorial Hospital
Baptist Memorial Hospital East
Baptist Memorial Hospital for Women
Baptist Memorial Hospital Lauderdale
Baptist Memorial Hospital Tipton
Baptist Memorial Hospital-Collierville
Baptist Memorial Hospital-Huntingdon
Baptist Memorial Hospital-Lauderdale
Baptist Memorial Hospital-Tipton
Baptist Memorial Hospital-Union City
Baptist North Tower Surgical Hospital
Baptist Plaza Surgicare, L.P.
Bedford County Medical Center
Belle Meade Dermatology
Blount Memorial Hospital
Bolivar General Hospital

Bradley Memorial Hospital
Bradley Memorial Hospital
Bristol Regional Medical Center
Bristol Surgery Center
Camden General Hospital
Campbell Surgery Center, LLC
Carla R. Retief MD
Carthage General Hospital
Centennial Medical Center
Centennial Surgery Center
Center for Day Surgery
Center for Oral & Facial Surgery
Charles S. Fulk, MD
Chattanooga Skin and Cancer Center
Children's West Surgery Center, LLC
Claiborne County Hospital
Clarksville Endoscopy Center
Clarksville Surgery Center
Cleveland Community Hospital
Columbia Tennessee Endoscopy, ASC, LLC
Community Cancer Center of Tullahoma
Cookeville Pathology Laboratory
Cookeville Regional Medical Center
Cookeville Surgery Center
Cool Springs Surgery Center
Copper Basin Medical Center
Crockett Hospital
Cumberland Dermatology PC
Cumberland Medical Center
Cumberland Medical Center INC
Cumberland River Hospital
DDC Surgery Center
Decatur County General Hospital
Delta Medical Center
Department of Pathology-ETSU
Dept of VA Medical Center-Memphis
Dermatology Associates of Knoxville
Dermatology Associates of Oak Ridge, PC
Dermatology Associates PC
Dermatopathology Lab of Mid-South Inc

Dickson Medical Associates PC Path Lab
Digestive Disease Clinic of Union City, PC
Digestive Disease Endoscopy Center
Digestive Disorders Endoscopy Center
Duckworth Pathology Group
Dyersburg Regional Medical Center
DynaCare Tennessee
East End Women's Health & Birth Center
East Memphis Surgery Center
East Tennessee Ambulatory Surgery Center
East Tennessee Children's Hospital
Elizabethton Surgery Center
Elizabethton Surgery Center, LLC
Endoscopy Center of Northeast Tennessee, PC
Endoscopy Center of Oak Ridge, LLC
Endscopy Center of Mid South, LLC
Erlanger - Bledsoe
Erlanger Medical Center
Erlanger Medical Center
Esoterix INC
Eye Care Surgery Center Of Memphis, LLC
Eye Surgery Center of East Tennessee
Fort Loudon Medical Center
Fort Sanders Regional Medical Center
Fort Sanders Sevier Medical Center
Fort Sanders West Outpatient Surgery Center
G. Baker Hubbard Ambulatory Surgery Center
G.I. Diagnostic & Therapeutic Center, LLC
Gastrointestinal Specialists of Clarksville, PC
Gateway Medical Center
Gateway-Vanderbilt Cancer Treatment Center
GI Pathology Partners PLLC
Gibson General Hospital
Grandview Medical Center
Hardin County General Hospital
Harton Regional Medical Center
Haywood Park Community Hospital
Healthsouth Chattanooga Surgery Center
Healthsouth Knoxville Surg CTR FRZ SECT RM
Healthsouth Knoxville Surgery Center
Healthsouth Nashville Surgery Center
Healthsouth Surgery Center of Clarksville
Henderson County Community Hospital
Hendersonville Medical Center
Henry County Medical Center
Highland Pathology Consultants PC
Hillside Hospital
Holston Valley Medical Center
Holston Valley Surgery Center, LLC
Horizon Medical Center
Humboldt General Hospital
Indian Path Medical Center
Innovative Pathology Services, PLLC
Integrated Microscopy Center
IPS-Clmogen LLC
Jackson-Madison County General Hospital
James A Quillen VAMC
James E. Turner, MD PHD
James H. Quillen VA Medical Center
Jamestown Regional Medical Center
Jefferson Memorial Hospital
Jellico Community Hospital
John Q. Binhlam, MD, PC
Johnson City Eye Surgery Center
Johnson City Medical Center
Johnson City Specialty Hospital
Johnson Cty Medical Center/Ambulatory Surgery
Kentucky Lake Surgery Center, LLC
Kingsport Ambulatory Surgery Center
Kingsport Bronchoscopy Center, Inc.
Kingsport Endoscopy Corporation
Knoxville Associated Pathologists
Knoxville Dermatopathology Laboratory
Laboratory Corporation of America
Laboratory Corporation of America
Laboratory For Kidney Pathology, INC
Lakeway Regional Hospital

Laughlin Memorial Hospital
Lawrence H. Reid, MD
Lebanon Surgical Center
Lebonheur Childrens Med Center Lab
Lebonheur Children's Medical Center
Lebonheur East Surgery Center
Lincoln Medical Center
Linda P. Woodbury, MD
Livingston Regional Hospital
LVC Outpatient Surgery, LLC
Macon County General Hospital
Marshall Medical Center
Maryville Surgical Center, LLC
Maury Regional Hospital
Maury Regional Surgery Center, L.L.C.
McKenzie Regional Hospital
McNairy Regional Hospital
Medical Center Endoscopy Group
Medical Center of Manchester
Memorial Healthcare System
Memorial Hospital Laboratory
Memphis Dermatology Clinic
Memphis Eye & Cataract Ambulatory
Surgery Center
Memphis Gastroenterology Endoscopy
Center East
Memphis Regional Gamma Knife Center
Methodist Healthcare -Fayette
Methodist Healthcare North
Methodist Healthcare South
Methodist Healthcare University
Hospital
Methodist Healthcare-Germantown
Methodist Medical Center of Oak Ridge
Methodist Surgery Center Germantown,
LP
Methodist University Hospital
Metro Nashville General Hospital
Metropolitan Nashville General Hospital
Middle Tennessee Ambulatory Surgery
Center
Middle Tennessee Medical Center
Middle Tennessee Surgical Care
Mid-South Gastroenterology Group
Mid-State Endoscopy Center
Midtown Surgery Center
Milan General Hospital
MOHS Micrographic Surgery
Laboratory
Morristown-Hamblen Healthcare System
Morristown-Hamblen Hospital
Mountain Empire Cataract & Eye
Surgery Center
Mountain Empire Surgery Center
Murfreesboro Dermatology Clinic, PLC
Nashville Endoscopy Center
Nashville Gastrointestinal Endoscopy
Center
North Side Hospital
North Surgery Center LP
NorthCrest Medical Center
Northridge Surgery Center, LP
NovaMed Surgery Center of
Chattanooga, LLC
Oral Facial Surgery Center
Our Lab
Outpatient Cytopathology Center
Park West Medical Center
ParkRidge East Hospital
Parkridge Medical Center
Parkridge Medical Center Laboratory
Parkwest Surgery Center, LP
Pathologists Laboratory PC
Pathology Laboratories West PLLC
Pathology Medical Associates, P.L.L.C
Paul Scates MD PC Family Medicine
PCA Southeast
Perry Community Hospital
Physicians Medical Laboratory
Physicians Pavilion Surgery Center
Physicians Surgery Center
Physician's Surgery Center of
Chattanooga
Physicians Surgery Center of Knoxville
Planned Parenthood of Middle and East
Tennessee, Inc.
Plaza Surgery, GP
PMA Surgery Center, LLC
Premier Orthopedic Surgery Center,
LLC
Prime, INC
Quest Laboratories Inc.

Reelfoot Pathology Laboratory
Regional Eye Surgery Center
Regional Hospital of Jackson
Regional Medical Center (The Med) at Memphis
Rhea Medical Center
Rheumatology Osteoporosis CTR-Memphis
Richard S. Hall, MD
Ridge Lake Ambulatory Surgery Center
River Park Hospital
Rivergate Dermatology
Riverside Surgery Center
Roane Medical Center
Rodger P Lewis, MD, PC
Saint Francis Hospital
Saint Jude Children's Research Hospital
Saint Mary's Ambulatory Surgery Center
Saint Mary's Health System
Saint Mary's Medical Center of Campbell County
Saint Thomas Campus Surgicare
Saint Thomas Hospital
Saint Thomas Medical Group
Endoscopy Center
Sapling Grove Surgery Center
Scott County Hospital
Skin Solutions Dermatology and Skin Cancer Surgery PC
Skyline Medical Center
Smith County Memorial Hospital
Southern Endoscopy Center
Southern Hills Medical Center
Southern Pathology Associates PC
Southern Tennessee Medical Center
Southern TN Medical Center
Southwind Endoscopy Center, PLLC
Specialty Surgery Center, PLLC
Spectrum Tennessee Network
St Francis Hospital Bartlett
St Francis Hospital Laboratory
St Jude Hospital
St Mary's Health System INC
St Thomas Hospital
Stewart Family Health
Stonecrest Medical Center
Stones River Hospital
Sullivan Digestive Center
Summit Medical Center
Summit Surgery Center
Sumner Regional Medical Center
Surgery Center At Saint Francis
Surgery Center of Cleveland, LLC
Surgery Center of Columbia
Surgical Services, PC
SurgiCenter of Murfreesboro Medical Clinic, PA
Sweetwater Hospital Association
Sycamore Shoals Hospital
Takoma Adventist
Takoma Adventist Hospital
Tennessee Christian Medical Center
Tennessee Christian Medical Center-Portland
Tennessee Endoscopy Center
Tennessee Pain Surgery Center, LLC
The Bone & Joint Surgery Center, LLC
The Center for Digestive Wellness
The Center for ENT, Laser & Cosmetic Surgery, LLC
The Endoscopy Center of Bristol
The Endoscopy Center of Centennial, L.P.
The Endoscopy Center of Knoxville
The Eye Surgery Center of Oak Ridge
The Medical Group of Greeneville
The Pathology Group
The Surgery Center of Athens
The Surgery Center of Middle Tennessee, LLC
The West Clinic, PC
Thompson Cancer Survival Center
Three Rivers Hospital
Transsouth Histology Laboratory
Tri Cities Skin and Cancer
Tri-Cities Outpatient Surgery, Inc.
Trinity Hospital
Trousdale Medical Center
Trumbull Laboratories LLC
Tullahoma Surgery Center, LLC
Unicoi County Memorial Hospital
United Regional Medical Center

University Ambulatory Surgical Center
University Medical Center
University Pathology Group PC
Upper Cumberland Physician's Surgery
Center, LLC
Urocenter
Urology Surgery Center, LP
UT Cancer Immunophenotyping and
Cytochem
UT Memorial Hospital
VA Medical Center
VA TN Valley HCS-Alvin C York
VA TN Valley HCS-Nashville
Vanderbilt Med Grp Mohs Microgrph
Surg
Vanderbilt Univ Med Center
Vanderbilt University Hospital
Vanderbilt Williamson Cancer Center,
LLC
Veterans Affairs TN Valley Health Care
Sys

Volunteer Community Hospital
Watauga Pathology Associates
Wayne Medical Center
Wellmont Bristol Regional Medical
Center
Wellmont Hawkins County Memorial
Hospital
Wellmont Holston Valley Medical
Center
Wellmont-Bristol Regional Medical
CTR
Wesberry Eye, Dental Institute, &
Surgery Center
Wesley Neuromuscular Laboratory
Wesley Ophthalmalic Plastic Surgery
White County Community Hospital
Williamson Medical Center
Wolf River Surgery Center
Women's Health Service Surgery
Woodbury Skin and Eye Center
Woods Memorial Hospital District

Appendix C.

Centers for Disease Control and Prevention

National Program of Cancer Registries Program Standards

The following are the National Program of Cancer Registries (NPCR) Program Standards as currently defined for the purposes of the Program Announcement. The NPCR Program Standards may change during the project period of the cooperative agreement.

Legislative Authority

- a. The state has a law authorizing a statewide cancer registry.
- b. The state has legislation or regulations in support of all eight criteria specified in Public Law 102-515.

Data Content and Format

- a. The information collected or derived on cancer cases includes all data elements currently required by the NPCR.
- b. The data codes for all required and recommended data elements are consistent with those currently prescribed by NPCR.
- c. The state central registry uses a standardized, NPCR-recommended data exchange record layout for the exchange of data.

Data Completeness

- a. Within 12 months of the close of the diagnosis year, 90% of expected, unduplicated cases are available to be counted as incident cases at the central cancer registry (CCR).
- b. Within 24 months of the close of the diagnosis year, 95% of expected, unduplicated cases are available to be counted as incident cases at the central cancer registry.
- c. Within 24 months of the close of the diagnosis year, the state has performed death clearance, and 3% or fewer of cases in the database are reported by death certificate only at the central cancer registry.
- d. Within 24 months of the close of the diagnosis year, 1 or fewer duplicate cases per 1,000 are present in the database at the central cancer registry.
- e. The central cancer registry performs death clearance and followback.

Data Timeliness

- a. Within 12 months of the close of the diagnosis year, 90% of expected, unduplicated cases are available to be counted as incident cases at the central cancer registry.

- b. Within 24 months of the close of the diagnosis year, 95% of expected, unduplicated cases are available to be counted as incident cases at the central cancer registry.
- c. Within 24 months of the close of the diagnosis year, the state has performed death clearance, and 3% or fewer of cases in the database are reported by death certificate only at the central cancer registry.
- d. Within 24 months of the close of the diagnosis year, 1 or fewer duplicate cases per 1,000 are present in the database at the central cancer registry.

Data Quality

- a. Within 12 months of the close of the diagnosis year, 97% of cases pass an NPCR-prescribed set of standard data edits.
- b. Within 24 months of the close of the diagnosis year, 99% of cases pass an NPCR-prescribed set of standard data edits.

Annual Report

Within 12 months of the end of the diagnosis year (and with data at least 90% complete), the state produces an annual report (hardcopy or electronic). The annual report includes, at minimum, age-adjusted incidence rates and age-adjusted mortality rates for the diagnosis year by sex for selected cancer sites and, where appropriate, by sex and race and ethnicity for selected cancer sites.

Data Use

Within 24 months after the completion of the diagnosis year, an analytic data set that meets NPCR standards for data completeness and quality is available for research purposes.

Data Monitoring

The state annually submits an analytic data file to CDC with individual records containing all requested data elements.

dated: October 14, 1999

Table 15. Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
All Cancer All Races 1999-2003 Males

County of Residence	Count	Rate	Confidence Interval
Tennessee	58049	460.2	456.4 - 464.1
Anderson	883	460.6	429.9 - 491.2
Bedford	358	416.5	372.5 - 460.5
Benton	237	472.2	410.6 - 533.8
Bledsoe	106	351.7	280.4 - 423.1
Blount	1297	490.1	462.9 - 517.3
Bradley	806	407.1	378.0 - 436.2
Campbell	494	476.9	432.7 - 521.0
Cannon	141	444.2	369.1 - 519.3
Carroll	378	467.2	419.7 - 514.7
Carter	483	328.8	298.9 - 358.8
Cheatham	304	441.5	388.1 - 494.9
Chester	117	327.5	267.6 - 387.4
Claiborne	381	508.4	455.8 - 561.0
Clay	86	368.3	287.8 - 448.7
Cocke	428	508.4	458.3 - 558.6
Coffee	578	469.1	430.1 - 508.2
Crockett	173	464.3	394.7 - 533.9
Cumberland	946	557.1	519.6 - 594.6
Davidson	5709	522.7	508.9 - 536.6
Decatur	164	463.5	391.2 - 535.7
Dekalb	215	491.6	424.8 - 558.3
Dickson	469	493.6	447.3 - 540.0
Dyer	325	387.8	344.9 - 430.6
Fayette	235	324.4	281.9 - 367.0
Fentress	230	525.4	455.6 - 595.1
Franklin	484	481.0	436.9 - 525.0
Gibson	602	475.3	437.2 - 513.5
Giles	304	422.3	373.8 - 470.9
Grainger	233	451.1	390.3 - 511.8
Greene	713	436.2	403.1 - 469.2
Grundy	177	491.1	417.3 - 564.9
Hamblen	603	441.1	404.5 - 477.7
Hamilton	3616	507.5	490.7 - 524.3
Hancock	53	279.2	203.0 - 355.3
Hardeman	270	401.9	353.2 - 450.5
Hardin	248	335.4	292.8 - 378.1
Hawkins	387	290.6	260.4 - 320.9
Haywood	183	420.6	359.2 - 481.9
Henderson	292	467.1	412.4 - 521.9
Henry	351	380.3	339.5 - 421.0
Hickman	273	505.6	443.5 - 567.7
Houston	88	367.1	289.5 - 444.8
Humphreys	269	573.6	502.1 - 645.1
Jackson	125	428.5	349.9 - 507.0
Jefferson	601	556.5	509.8 - 603.2
Johnson	139	269.5	223.8 - 315.2
Knox	4050	487.2	471.9 - 502.5
Lake	70	383.8	291.1 - 476.5
Lauderdale	224	386.4	335.0 - 437.9
Lawrence	549	573.3	524.4 - 622.2
Lewis	137	497.1	411.5 - 582.6
Lincoln	221	267.2	231.3 - 303.1
Loudon	609	529.8	485.5 - 574.0
McMinn	505	411.6	374.9 - 448.3
McNairy	257	377.6	330.6 - 424.7

County of Residence	Count	Rate	Confidence Interval
Macon	206	442.9	380.2 - 505.7
Madison	855	441.4	411.5 - 471.3
Marion	318	457.6	404.6 - 510.7
Marshall	327	562.2	500.2 - 624.3
Maury	821	551.9	513.3 - 590.5
Meigs	129	474.2	387.7 - 560.6
Monroe	434	450.5	407.0 - 493.9
Montgomery	869	411.2	382.3 - 440.1
Moore	23	144.2	83.7 - 204.6
Morgan	180	400.8	339.4 - 462.3
Obion	374	450.6	404.3 - 496.9
Overton	288	529.9	467.3 - 592.5
Perry	101	460.2	367.9 - 552.4
Pickett	57	349.8	255.5 - 444.2
Polk	186	443.9	377.0 - 510.9
Putnam	820	563.6	524.6 - 602.7
Rhea	336	472.4	420.6 - 524.2
Roane	807	552.2	513.1 - 591.4
Robertson	615	542.1	497.8 - 586.5
Rutherford	1368	449.6	424.1 - 475.0
Scott	206	453.3	388.7 - 517.9
Sequatchie	98	360.8	286.9 - 434.7
Sevier	855	476.2	442.8 - 509.7
Shelby	6734	421.8	411.4 - 432.2
Smith	139	328.7	273.4 - 384.0
Stewart	144	427.8	356.7 - 499.0
Sullivan	1967	475.4	453.9 - 496.8
Sumner	1360	494.1	466.6 - 521.6
Tipton	401	395.1	354.6 - 435.6
Trousdale	78	408.2	316.3 - 500.2
Unicoi	203	388.0	333.7 - 442.3
Union	157	390.9	325.6 - 456.2
Van Buren	50	337.5	242.5 - 432.5
Warren	393	430.3	386.8 - 473.8
Washington	1199	460.9	434.4 - 487.4
Wayne	156	353.7	296.9 - 410.4
Weakley	299	366.8	325.0 - 408.7
White	359	572.2	511.7 - 632.8
Williamson	1176	528.1	495.0 - 561.3
Wilson	778	419.6	388.1 - 451.2

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 cases were reported

Table 16. Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
All Cancer All Races 1999-2003 Females

County of Residence	Count	Rate	Confidence Interval
Tennessee	58390	362.2	359.3 - 365.2
Anderson	858	349.8	325.9 - 373.7
Bedford	393	382.9	344.8 - 421.0
Benton	231	400.0	347.0 - 453.0
Bledsoe	88	277.2	218.8 - 335.7
Blount	1213	365.7	345.0 - 386.5
Bradley	806	329.1	306.3 - 351.9
Campbell	456	358.3	324.8 - 391.8
Cannon	119	310.3	254.0 - 366.7
Carroll	426	451.0	406.7 - 495.4
Carter	527	288.9	263.9 - 314.0
Cheatham	316	382.4	339.6 - 425.3
Chester	119	278.1	227.6 - 328.7
Claiborne	337	372.1	332.1 - 412.1
Clay	70	263.6	200.8 - 326.5
Cocke	400	390.7	352.1 - 429.4
Coffee	504	341.7	311.5 - 371.9
Crockett	131	279.4	230.4 - 328.4
Cumberland	712	400.8	369.9 - 431.6
Davidson	6029	396.6	386.6 - 406.7
Decatur	135	337.9	278.2 - 397.6
Dekalb	204	379.1	326.4 - 431.7
Dickson	449	381.9	346.5 - 417.3
Dyer	407	373.9	337.2 - 410.6
Fayette	200	232.7	200.2 - 265.2
Fentress	196	384.0	329.6 - 438.4
Franklin	386	310.6	279.2 - 342.0
Gibson	684	410.5	378.6 - 442.4
Giles	307	331.1	293.5 - 368.8
Grainger	237	398.7	347.5 - 450.0
Greene	668	329.3	304.0 - 354.6
Grundy	171	409.0	346.6 - 471.4
Hamblen	696	395.0	365.3 - 424.6
Hamilton	3577	377.0	364.5 - 389.4
Hancock	55	255.8	186.7 - 324.9
Hardeman	237	321.9	280.6 - 363.2
Hardin	244	293.1	255.5 - 330.6
Hawkins	361	225.0	201.6 - 248.5
Haywood	194	324.8	278.5 - 371.0
Henderson	287	365.8	323.0 - 408.6
Henry	372	342.3	306.5 - 378.1
Hickman	232	390.1	339.6 - 440.6
Houston	82	315.2	245.7 - 384.8
Humphreys	336	600.3	535.3 - 665.4
Jackson	91	262.4	207.7 - 317.1
Jefferson	525	405.9	370.9 - 441.0
Johnson	155	293.0	245.9 - 340.1
Knox	4208	380.4	368.9 - 392.0
Lake	75	371.6	284.2 - 459.1
Lauderdale	264	364.5	320.0 - 408.9
Lawrence	473	386.3	350.9 - 421.7
Lewis	106	312.1	252.2 - 372.0
Lincoln	226	219.9	190.6 - 249.1
Loudon	560	410.1	375.3 - 444.9
McMinn	500	326.7	297.7 - 355.7
McNairy	265	338.6	296.8 - 380.3

County of Residence	Count	Rate	Confidence Interval
Macon	172	299.5	254.3 - 344.6
Madison	893	351.3	328.2 - 374.5
Marion	320	384.6	342.2 - 427.1
Marshall	290	381.1	337.0 - 425.2
Maury	770	395.6	367.6 - 423.6
Meigs	120	388.6	318.4 - 458.9
Monroe	434	378.8	342.9 - 414.8
Montgomery	920	333.3	311.6 - 355.1
Moore	34	185.4	121.7 - 249.1
Morgan	149	285.6	239.4 - 331.7
Obion	347	335.3	299.2 - 371.4
Overton	201	310.1	266.6 - 353.7
Perry	101	411.3	329.0 - 493.6
Pickett	46	284.6	198.9 - 370.3
Polk	168	330.3	279.8 - 380.9
Putnam	785	438.3	407.3 - 469.2
Rhea	323	374.5	333.0 - 416.0
Roane	723	413.7	383.1 - 444.4
Robertson	552	391.9	359.1 - 424.6
Rutherford	1425	377.5	357.6 - 397.4
Scott	213	367.5	317.9 - 417.2
Sequatchie	77	241.6	187.2 - 296.0
Sevier	789	373.0	346.8 - 399.2
Shelby	7924	350.3	342.5 - 358.0
Smith	158	305.5	257.4 - 353.5
Stewart	125	329.7	271.3 - 388.0
Sullivan	1993	386.6	369.3 - 403.8
Sumner	1234	350.9	331.2 - 370.5
Tipton	434	338.4	306.4 - 370.3
Trousdale	81	372.4	290.6 - 454.2
Unicoi	215	335.8	289.5 - 382.1
Union	140	293.6	244.7 - 342.5
Van Buren	50	299.1	215.4 - 382.7
Warren	366	320.4	287.3 - 353.5
Washington	1234	380.3	358.9 - 401.7
Wayne	141	302.8	251.9 - 353.7
Weakley	301	298.7	264.2 - 333.3
White	284	388.2	342.3 - 434.1
Williamson	1163	404.1	380.2 - 428.1
Wilson	787	346.4	322.0 - 370.8

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 cases were reported

Table 17. Total Cancer Deaths and Age-Adjusted¹ Cancer Mortality Rates²
All Cancer All Races 1999-2003 Males

County of Residence	Count	Rate	Confidence Interval
Tennessee	33024	283.3	280.2 - 286.5
Anderson	489	264.9	241.0 - 288.7
Bedford	226	286.8	248.2 - 325.5
Benton	138	286.0	236.9 - 335.1
Bledsoe	66	230.3	170.5 - 290.0
Blount	697	280.9	259.6 - 302.3
Bradley	495	269.5	244.6 - 294.3
Campbell	308	323.3	284.7 - 361.9
Cannon	78	267.8	206.3 - 329.3
Carroll	250	314.3	275.0 - 353.6
Carter	409	299.5	269.6 - 329.5
Cheatham	172	266.8	223.4 - 310.3
Chester	96	278.4	222.0 - 334.8
Claiborne	216	321.0	276.0 - 365.9
Clay	66	299.7	225.2 - 374.1
Cocke	248	315.3	274.0 - 356.5
Coffee	327	282.1	250.4 - 313.8
Crockett	90	247.2	195.8 - 298.6
Cumberland	390	243.8	218.0 - 269.6
Davidson	2841	281.9	271.3 - 292.5
Decatur	90	271.3	214.1 - 328.5
Dekalb	98	241.2	192.4 - 290.1
Dickson	228	256.3	221.4 - 291.2
Dyer	201	254.3	218.5 - 290.2
Fayette	174	260.1	220.3 - 299.8
Fentress	139	323.8	268.4 - 379.2
Franklin	300	320.2	282.6 - 357.8
Gibson	392	311.0	280.1 - 341.9
Giles	192	276.5	236.5 - 316.5
Grainger	150	324.7	269.7 - 379.7
Greene	501	322.6	293.2 - 352.0
Grundy	100	291.5	233.0 - 350.1
Hamblen	376	300.2	268.3 - 332.0
Hamilton	1862	281.9	268.8 - 295.0
Hancock	52	298.0	214.7 - 381.3
Hardeman	160	259.2	218.1 - 300.3
Hardin	199	284.1	243.6 - 324.6
Hawkins	327	266.5	236.3 - 296.8
Haywood	110	269.5	218.6 - 320.3
Henderson	186	322.0	274.5 - 369.5
Henry	288	323.4	284.9 - 361.8
Hickman	153	312.1	259.1 - 365.1
Houston	66	283.0	213.8 - 352.2
Humphreys	138	303.0	249.8 - 356.2
Jackson	96	350.0	276.1 - 423.8
Jefferson	245	251.6	218.1 - 285.1
Johnson	126	260.3	213.9 - 306.7
Knox	2034	264.7	252.8 - 276.5
Lake	57	327.8	240.3 - 415.3
Lauderdale	166	306.0	258.6 - 353.4
Lawrence	281	312.2	274.8 - 349.6
Lewis	78	293.3	226.3 - 360.3
Lincoln	241	307.5	267.7 - 347.3
Loudon	274	262.2	229.0 - 295.3
McMinn	337	295.8	263.1 - 328.5
McNairy	201	312.2	267.9 - 356.4

County of Residence	Count	Rate	Confidence Interval
Macon	119	281.0	227.9 - 334.1
Madison	471	261.9	237.9 - 285.9
Marion	206	311.4	266.5 - 356.4
Marshall	178	318.3	270.3 - 366.3
Maury	410	293.7	264.6 - 322.9
Meigs	76	303.7	228.9 - 378.6
Monroe	274	302.9	265.9 - 339.8
Montgomery	515	276.1	250.6 - 301.6
Moore	31	229.7	144.9 - 314.4
Morgan	106	255.9	204.2 - 307.6
Obion	245	314.4	274.4 - 354.4
Overton	169	323.2	273.4 - 373.0
Perry	65	317.0	237.2 - 396.7
Pickett	39	260.8	175.4 - 346.1
Polk	111	279.6	224.6 - 334.7
Putnam	373	270.3	242.4 - 298.2
Rhea	187	289.4	246.6 - 332.3
Roane	408	304.1	273.3 - 334.8
Robertson	292	271.3	238.8 - 303.8
Rutherford	715	274.2	252.6 - 295.8
Scott	132	325.8	267.2 - 384.3
Sequatchie	56	213.4	154.9 - 271.9
Sevier	435	266.1	239.4 - 292.8
Shelby	4273	293.6	284.5 - 302.7
Smith	99	247.3	197.8 - 296.8
Stewart	94	294.0	233.0 - 355.0
Sullivan	1098	286.9	269.3 - 304.4
Sumner	685	273.6	252.0 - 295.2
Tipton	253	271.9	236.7 - 307.0
Trousdale	54	305.9	222.4 - 389.4
Unicoi	125	254.7	209.0 - 300.3
Union	112	323.2	256.6 - 389.8
Van Buren	39	268.4	183.1 - 353.7
Warren	230	261.2	226.6 - 295.8
Washington	689	285.0	263.3 - 306.7
Wayne	108	251.9	203.3 - 300.6
Weakley	204	262.5	226.2 - 298.8
White	184	309.8	263.7 - 355.9
Williamson	459	255.0	229.2 - 280.7
Wilson	485	305.3	276.1 - 334.5

Source: Tennessee Department of Health, Office of Health Statistics.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 deaths were reported

Table 18. Total Cancer Deaths and Age-Adjusted¹ Cancer Mortality Rates²
All Cancer All Races 1999-2003 Females

County of Residence	Count	Rate	Confidence Interval
Tennessee	28500	171.2	169.2 - 173.2
Anderson	405	155.1	139.8 - 170.5
Bedford	175	162.9	138.6 - 187.1
Benton	106	173.7	139.4 - 207.9
Bledsoe	46	144.1	102.0 - 186.2
Blount	532	153.7	140.6 - 166.9
Bradley	382	155.0	139.4 - 170.6
Campbell	222	164.4	142.5 - 186.4
Cannon	64	161.1	121.1 - 201.0
Carroll	193	179.6	153.2 - 206.0
Carter	345	175.7	157.0 - 194.4
Cheatham	155	198.8	167.0 - 230.6
Chester	72	153.4	117.5 - 189.3
Claiborne	193	207.0	177.6 - 236.4
Clay	50	177.7	127.8 - 227.5
Cocke	195	186.9	160.5 - 213.2
Coffee	261	167.2	146.7 - 187.6
Crockett	57	111.7	81.6 - 141.8
Cumberland	289	154.5	136.2 - 172.9
Davidson	2824	180.6	173.9 - 187.3
Decatur	88	190.5	149.6 - 231.4
Dekalb	82	144.3	112.9 - 175.8
Dickson	197	166.6	143.3 - 189.9
Dyer	211	178.1	153.8 - 202.4
Fayette	130	148.1	122.6 - 173.7
Fentress	86	162.1	127.6 - 196.6
Franklin	188	144.5	123.7 - 165.3
Gibson	342	182.8	162.6 - 202.9
Giles	174	175.6	149.1 - 202.2
Grainger	105	173.6	140.1 - 207.0
Greene	319	151.6	134.8 - 168.4
Grundy	84	191.9	150.1 - 233.6
Hamblen	336	185.3	165.3 - 205.3
Hamilton	1745	173.2	165.0 - 181.5
Hancock	37	162.6	109.7 - 215.6
Hardeman	144	182.7	152.6 - 212.9
Hardin	125	137.1	112.7 - 161.5
Hawkins	257	154.0	135.0 - 173.0
Haywood	102	160.0	128.6 - 191.5
Henderson	134	163.6	135.7 - 191.5
Henry	209	174.1	150.0 - 198.2
Hickman	101	166.5	133.8 - 199.1
Houston	45	160.7	113.2 - 208.3
Humphreys	106	178.3	144.1 - 212.5
Jackson	53	147.0	106.8 - 187.2
Jefferson	216	159.7	138.2 - 181.2
Johnson	102	180.4	144.9 - 215.9
Knox	1955	169.0	161.4 - 176.5
Lake	52	226.8	163.0 - 290.6
Lauderdale	145	189.0	157.7 - 220.2
Lawrence	204	157.7	135.7 - 179.7
Lewis	61	169.8	126.9 - 212.7
Lincoln	182	161.2	137.4 - 185.0
Loudon	244	171.9	149.9 - 193.9
McMinn	278	174.1	153.4 - 194.7
McNairy	141	165.6	137.6 - 193.6

County of Residence	Count	Rate	Confidence Interval
Macon	119	193.7	158.5 - 229.0
Madison	462	173.1	157.1 - 189.0
Marion	168	198.9	168.7 - 229.1
Marshall	135	170.4	141.4 - 199.3
Maury	379	188.9	169.8 - 208.0
Meigs	55	183.6	134.7 - 232.6
Monroe	196	165.4	142.1 - 188.8
Montgomery	469	179.6	163.2 - 195.9
Moore	36	185.8	123.6 - 248.1
Morgan	94	175.9	140.2 - 211.7
Obion	177	154.0	130.9 - 177.2
Overton	113	166.5	135.4 - 197.6
Perry	52	206.0	148.8 - 263.2
Pickett	30	150.2	95.2 - 205.3
Polk	114	217.6	177.2 - 258.0
Putnam	345	183.9	164.3 - 203.4
Rhea	162	177.3	149.6 - 205.0
Roane	318	169.3	150.6 - 188.1
Robertson	241	171.9	150.1 - 193.6
Rutherford	601	170.8	157.0 - 184.5
Scott	110	188.5	153.1 - 223.8
Sequatchie	54	162.4	118.9 - 205.9
Sevier	360	170.3	152.6 - 188.0
Shelby	4127	181.9	176.3 - 187.5
Smith	75	135.5	104.5 - 166.5
Stewart	83	210.2	164.6 - 255.7
Sullivan	969	175.9	164.7 - 187.1
Sumner	604	173.1	159.3 - 187.0
Tipton	232	182.6	159.1 - 206.2
Trousdale	51	224.1	161.6 - 286.6
Unicoi	125	181.0	148.5 - 213.4
Union	77	164.8	127.8 - 201.8
Van Buren	31	188.6	121.8 - 255.4
Warren	165	137.7	116.5 - 158.9
Washington	521	151.8	138.6 - 164.9
Wayne	76	154.2	119.1 - 189.3
Weakley	160	141.8	119.2 - 164.3
White	136	175.8	145.9 - 205.7
Williamson	381	149.8	134.4 - 165.1
Wilson	351	159.0	142.2 - 175.8

Source: Tennessee Department of Health, Office of Health Statistics.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 deaths were reported

Table 19. Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
Lung and Bronchus All Races 1999-2003 Males

County of Residence	Count	Rate	Confidence Interval
Tennessee	12421	98.9	97.1 - 100.6
Anderson	174	91.4	77.7 - 105.1
Bedford	94	111.7	88.6 - 134.7
Benton	62	119.5	89.0 - 150.0
Bledsoe	20	63.3	34.7 - 92.0
Blount	282	106.0	93.4 - 118.6
Bradley	177	86.1	73.0 - 99.1
Campbell	130	122.3	100.2 - 144.4
Cannon	42	133.0	92.0 - 174.1
Carroll	94	114.5	91.1 - 137.8
Carter	103	67.3	54.1 - 80.5
Cheatham	85	133.1	102.7 - 163.4
Chester	22	59.7	34.5 - 84.8
Claiborne	117	151.9	123.7 - 180.1
Clay	17	71.7	37.0 - 106.5
Cocke	97	108.8	86.3 - 131.4
Coffee	128	106.0	87.2 - 124.7
Crockett	37	97.8	66.1 - 129.4
Cumberland	164	91.5	77.0 - 106.0
Davidson	1100	103.6	97.4 - 109.8
Decatur	41	111.6	76.8 - 146.3
Dekalb	60	140.0	104.0 - 176.0
Dickson	105	112.2	90.0 - 134.5
Dyer	83	97.7	76.3 - 119.1
Fayette	37	49.6	33.3 - 66.0
Fentress	54	120.2	87.4 - 153.1
Franklin	106	106.3	85.6 - 127.1
Gibson	126	97.4	80.3 - 114.4
Giles	68	89.1	67.5 - 110.7
Grainger	65	129.7	96.5 - 162.9
Greene	187	112.6	95.9 - 129.2
Grundy	44	121.1	84.5 - 157.7
Hamblen	146	107.3	89.3 - 125.3
Hamilton	722	100.4	92.9 - 107.8
Hancock	13	66.4	30.0 - 102.7
Hardeman	54	83.5	61.0 - 106.0
Hardin	70	94.2	71.7 - 116.7
Hawkins	95	70.7	55.8 - 85.5
Haywood	52	121.0	87.8 - 154.1
Henderson	73	117.3	89.8 - 144.7
Henry	87	91.3	71.8 - 110.9
Hickman	54	98.4	71.6 - 125.2
Houston	24	98.7	58.7 - 138.8
Humphreys	73	154.3	117.5 - 191.0
Jackson	37	123.3	81.6 - 165.0
Jefferson	125	116.7	95.2 - 138.3
Johnson	31	55.9	35.9 - 75.8
Knox	876	107.3	100.1 - 114.6
Lake	24	136.7	80.8 - 192.6
Lauderdale	66	115.4	87.2 - 143.6
Lawrence	122	123.1	101.0 - 145.2
Lewis	27	96.6	58.9 - 134.2
Lincoln	50	59.6	42.9 - 76.4
Loudon	137	113.2	93.3 - 133.1
McMinn	111	88.2	71.4 - 105.0
McNairy	73	105.5	80.9 - 130.1

County of Residence	Count	Rate	Confidence Interval
Macon	50	103.7	74.0 - 133.4
Madison	159	85.1	71.7 - 98.5
Marion	59	80.3	59.1 - 101.6
Marshall	80	136.6	106.1 - 167.2
Maury	178	123.2	104.7 - 141.6
Meigs	25	89.6	53.3 - 125.9
Monroe	121	127.6	104.4 - 150.8
Montgomery	185	92.1	78.2 - 106.1
Moore	*		
Morgan	40	84.0	57.3 - 110.8
Obion	83	99.2	77.7 - 120.8
Overton	64	116.5	87.2 - 145.7
Perry	36	164.4	109.8 - 219.0
Pickett	14	82.6	37.9 - 127.3
Polk	44	98.1	67.8 - 128.3
Putnam	174	118.1	100.4 - 135.9
Rhea	69	97.8	74.0 - 121.6
Roane	222	150.3	130.0 - 170.6
Robertson	139	120.8	100.1 - 141.5
Rutherford	278	99.6	87.2 - 111.9
Scott	55	120.2	87.4 - 153.0
Sequatchie	26	94.4	56.8 - 132.0
Sevier	187	103.0	87.4 - 118.5
Shelby	1297	83.3	78.7 - 88.0
Smith	34	80.5	53.1 - 107.9
Stewart	35	109.3	72.1 - 146.4
Sullivan	413	99.4	89.7 - 109.2
Sumner	260	94.9	82.9 - 106.9
Tipton	98	92.6	73.7 - 111.5
Trousdale	23	118.4	69.1 - 167.6
Unicoi	36	70.4	47.1 - 93.8
Union	45	117.3	80.3 - 154.2
Van Buren	9	60.3	20.7 - 99.8
Warren	86	91.4	71.8 - 111.1
Washington	221	84.2	72.9 - 95.4
Wayne	36	81.6	54.3 - 108.9
Weakley	63	77.1	57.9 - 96.3
White	81	128.1	99.6 - 156.6
Williamson	196	97.7	83.0 - 112.4
Wilson	134	73.1	59.9 - 86.4

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 cases were reported

Table 20. Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
Lung and Bronchus All Races 1999-2003 Females

County of Residence	Count	Rate	Confidence Interval
Tennessee	8523	52.2	51.1 - 53.3
Anderson	143	56.2	46.9 - 65.5
Bedford	61	57.9	43.3 - 72.5
Benton	41	64.8	44.8 - 84.8
Bledsoe	8	22.4	6.9 - 38.0
Blount	174	51.8	44.0 - 59.5
Bradley	103	40.9	33.0 - 48.8
Campbell	82	62.0	48.5 - 75.6
Cannon	18	44.8	24.0 - 65.7
Carroll	52	52.9	38.2 - 67.5
Carter	70	37.7	28.8 - 46.6
Cheatham	57	72.9	53.7 - 92.1
Chester	14	31.7	15.0 - 48.5
Claiborne	71	75.9	58.2 - 93.6
Clay	17	61.3	32.0 - 90.6
Cocke	74	68.6	52.9 - 84.2
Coffee	72	46.6	35.7 - 57.4
Crockett	14	29.9	14.0 - 45.9
Cumberland	118	61.3	49.9 - 72.7
Davidson	908	60.2	56.2 - 64.1
Decatur	17	38.8	19.7 - 57.8
Dekalb	24	43.7	26.1 - 61.3
Dickson	76	64.4	49.9 - 78.9
Dyer	52	46.9	34.1 - 59.7
Fayette	21	24.1	13.7 - 34.4
Fentress	37	68.1	46.0 - 90.1
Franklin	61	47.3	35.3 - 59.2
Gibson	90	51.9	40.9 - 62.8
Giles	54	57.8	42.3 - 73.4
Grainger	34	55.1	36.4 - 73.7
Greene	101	47.8	38.4 - 57.2
Grundy	23	52.9	31.1 - 74.7
Hamblen	123	66.9	55.0 - 78.8
Hamilton	532	54.7	50.0 - 59.4
Hancock	12	54.7	23.2 - 86.2
Hardeman	29	37.5	23.8 - 51.1
Hardin	42	48.4	33.6 - 63.2
Hawkins	47	28.8	20.5 - 37.1
Haywood	19	31.8	17.5 - 46.2
Henderson	49	61.8	44.4 - 79.1
Henry	52	44.7	32.4 - 57.0
Hickman	41	67.4	46.7 - 88.1
Houston	17	64.3	33.3 - 95.2
Humphreys	40	66.7	45.9 - 87.4
Jackson	12	33.4	14.5 - 52.3
Jefferson	75	55.8	43.1 - 68.6
Johnson	28	52.8	32.9 - 72.7
Knox	653	58.0	53.6 - 62.5
Lake	18	86.5	45.6 - 127.3
Lauderdale	35	48.2	32.1 - 64.3
Lawrence	64	51.4	38.7 - 64.1
Lewis	23	67.8	39.9 - 95.7
Lincoln	23	22.4	13.1 - 31.7
Loudon	85	59.5	46.7 - 72.3
McMinn	80	49.9	38.8 - 60.9
McNairy	37	46.1	31.0 - 61.2

County of Residence	Count	Rate	Confidence Interval
Macon	21	35.0	20.0 - 50.0
Madison	122	47.1	38.7 - 55.5
Marion	44	51.1	36.0 - 66.3
Marshall	47	61.4	43.8 - 79.1
Maury	121	61.4	50.5 - 72.4
Meigs	15	43.6	21.4 - 65.8
Monroe	60	50.8	37.9 - 63.8
Montgomery	119	45.2	37.0 - 53.3
Moore	*		
Morgan	24	44.7	26.8 - 62.7
Obion	53	48.2	35.1 - 61.2
Overton	39	56.6	38.7 - 74.5
Perry	14	53.8	25.2 - 82.4
Pickett	7	37.1	9.3 - 64.9
Polk	31	60.2	38.9 - 81.6
Putnam	126	69.2	57.0 - 81.3
Rhea	49	55.4	39.7 - 71.1
Roane	128	69.7	57.5 - 81.9
Robertson	82	58.4	45.7 - 71.0
Rutherford	215	61.1	52.8 - 69.3
Scott	45	74.8	52.6 - 97.0
Sequatchie	9	26.2	9.0 - 43.4
Sevier	122	57.3	47.1 - 67.5
Shelby	1040	46.9	44.1 - 49.8
Smith	17	33.8	17.7 - 49.9
Stewart	23	57.7	33.9 - 81.5
Sullivan	289	52.5	46.4 - 58.6
Sumner	179	50.8	43.3 - 58.3
Tipton	59	46.3	34.5 - 58.2
Trousdale	15	67.7	33.2 - 102.3
Unicoi	21	30.1	17.2 - 43.0
Union	25	52.9	32.1 - 73.8
Van Buren	6	34.7	6.8 - 62.7
Warren	50	42.3	30.5 - 54.1
Washington	171	51.6	43.9 - 59.4
Wayne	17	35.1	18.3 - 52.0
Weakley	42	40.8	28.3 - 53.2
White	42	55.6	38.6 - 72.6
Williamson	117	45.4	37.0 - 53.7
Wilson	89	40.7	32.2 - 49.2

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 cases were reported

Table 21. Total Cancer Deaths and Age-Adjusted¹ Cancer Mortality Rates²
Lung and Bronchus All Races 1999-2003 Males

County of Residence	Count	Rate	Confidence Interval
Tennessee	12439	102.7	100.9 - 104.6
Anderson	191	101.6	87.0 - 116.2
Bedford	91	113.4	89.3 - 137.5
Benton	60	116.8	86.5 - 147.2
Bledsoe	22	80.9	46.0 - 115.9
Blount	258	98.9	86.6 - 111.1
Bradley	181	91.6	77.8 - 105.4
Campbell	134	130.7	107.5 - 154.0
Cannon	36	125.5	83.1 - 168.0
Carroll	94	115.0	91.6 - 138.4
Carter	137	92.3	76.5 - 108.0
Cheatham	80	119.6	91.3 - 147.9
Chester	36	103.1	69.0 - 137.3
Claiborne	100	135.4	108.0 - 162.8
Clay	28	122.8	76.2 - 169.3
Cocke	93	113.7	89.5 - 138.0
Coffee	118	98.1	79.9 - 116.3
Crockett	32	87.6	57.1 - 118.1
Cumberland	131	73.5	60.3 - 86.6
Davidson	1105	106.4	100.0 - 112.8
Decatur	39	113.1	76.8 - 149.3
Dekalb	43	103.5	71.9 - 135.1
Dickson	91	98.4	77.5 - 119.3
Dyer	75	90.4	69.6 - 111.2
Fayette	58	81.7	60.1 - 103.3
Fentress	60	134.3	99.4 - 169.2
Franklin	109	110.4	89.0 - 131.9
Gibson	139	107.4	89.5 - 125.3
Giles	76	101.7	78.4 - 125.0
Grainger	64	130.4	96.7 - 164.1
Greene	201	125.1	107.2 - 143.1
Grundy	46	131.6	92.8 - 170.4
Hamblen	145	109.0	90.6 - 127.4
Hamilton	628	91.0	83.7 - 98.3
Hancock	22	120.2	68.3 - 172.2
Hardeman	64	104.1	78.1 - 130.1
Hardin	88	123.0	96.7 - 149.4
Hawkins	149	116.6	97.1 - 136.1
Haywood	47	113.2	80.5 - 145.8
Henderson	81	134.0	104.2 - 163.8
Henry	105	116.2	93.3 - 139.0
Hickman	56	110.4	79.9 - 141.0
Houston	26	109.9	67.0 - 152.7
Humphreys	56	117.6	85.6 - 149.5
Jackson	52	177.8	126.5 - 229.1
Jefferson	96	93.2	73.5 - 112.9
Johnson	43	87.7	61.1 - 114.2
Knox	750	94.7	87.8 - 101.7
Lake	30	175.8	111.0 - 240.6
Lauderdale	68	126.3	95.8 - 156.8
Lawrence	124	134.1	109.9 - 158.2
Lewis	23	77.7	45.2 - 110.1
Lincoln	94	113.5	90.2 - 136.7
Loudon	111	97.5	78.4 - 116.5
McMinn	130	107.3	88.3 - 126.3
McNairy	80	120.0	93.1 - 146.8

County of Residence	Count	Rate	Confidence Interval
Macon	50	117.7	83.7 - 151.6
Madison	144	78.1	65.2 - 91.0
Marion	74	104.3	79.4 - 129.1
Marshall	70	119.4	90.8 - 147.9
Maury	166	117.3	99.1 - 135.6
Meigs	30	113.2	71.3 - 155.1
Monroe	99	102.6	81.9 - 123.2
Montgomery	220	116.7	100.4 - 132.9
Moore	14	98.6	45.1 - 152.1
Morgan	50	114.5	81.1 - 147.9
Obion	88	111.3	87.7 - 135.0
Overton	69	128.3	97.4 - 159.3
Perry	26	130.7	78.6 - 182.8
Pickett	22	131.8	74.6 - 189.0
Polk	41	93.5	63.4 - 123.7
Putnam	155	107.5	90.3 - 124.7
Rhea	68	98.4	74.2 - 122.5
Roane	178	126.8	107.6 - 145.9
Robertson	121	107.9	88.0 - 127.8
Rutherford	283	104.9	92.0 - 117.8
Scott	55	131.3	95.3 - 167.3
Sequatchie	25	92.8	54.9 - 130.6
Sevier	166	95.8	80.4 - 111.2
Shelby	1380	92.1	87.1 - 97.1
Smith	48	121.0	86.2 - 155.8
Stewart	46	142.0	100.0 - 184.0
Sullivan	391	98.2	88.2 - 108.2
Sumner	271	104.1	91.1 - 117.0
Tipton	107	106.3	85.3 - 127.3
Trousdale	25	135.1	81.1 - 189.1
Unicoi	42	85.2	59.0 - 111.4
Union	47	128.2	88.2 - 168.3
Van Buren	16	104.1	52.4 - 155.7
Warren	92	100.1	79.3 - 120.9
Washington	228	90.6	78.7 - 102.6
Wayne	44	99.1	69.2 - 129.1
Weakley	80	101.1	78.8 - 123.3
White	77	123.6	95.3 - 151.9
Williamson	166	89.8	75.1 - 104.5
Wilson	169	101.5	85.2 - 117.8

Source: Tennessee Department of Health, Office of Health Statistics.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 deaths were reported

Table 22. Total Cancer Deaths and Age-Adjusted¹ Cancer Mortality Rates²
Lung and Bronchus All Races 1999-2003 Females

County of Residence	Count	Rate	Confidence Interval
Tennessee	7366	44.6	43.6 - 45.6
Anderson	126	48.1	39.6 - 56.5
Bedford	50	46.6	33.6 - 59.6
Benton	29	47.3	29.7 - 64.9
Bledsoe	15	43.3	21.3 - 65.4
Blount	141	41.0	34.2 - 47.8
Bradley	99	39.1	31.4 - 46.9
Campbell	83	62.3	48.7 - 75.9
Cannon	11	28.1	11.3 - 44.8
Carroll	48	47.9	34.0 - 61.8
Carter	78	40.5	31.4 - 49.5
Cheatham	52	66.0	47.8 - 84.2
Chester	11	24.4	10.0 - 38.9
Claiborne	52	55.2	40.1 - 70.2
Clay	14	52.3	24.3 - 80.2
Cocke	52	48.6	35.4 - 61.9
Coffee	74	46.0	35.5 - 56.5
Crockett	12	24.0	10.1 - 37.9
Cumberland	80	40.0	31.1 - 49.0
Davidson	765	49.7	46.2 - 53.3
Decatur	21	45.8	25.9 - 65.7
Dekalb	25	44.9	27.2 - 62.6
Dickson	63	53.5	40.3 - 66.8
Dyer	56	48.7	35.9 - 61.5
Fayette	28	31.8	19.9 - 43.6
Fentress	29	53.1	33.7 - 72.5
Franklin	60	46.7	34.8 - 58.6
Gibson	84	46.3	36.1 - 56.5
Giles	43	44.8	31.3 - 58.4
Grainger	30	48.2	30.8 - 65.5
Greene	78	36.6	28.4 - 44.7
Grundy	18	40.1	21.4 - 58.8
Hamblen	102	55.3	44.5 - 66.1
Hamilton	428	43.0	38.9 - 47.1
Hancock	9	37.9	13.0 - 62.8
Hardeman	35	44.7	29.8 - 59.6
Hardin	33	37.1	24.3 - 49.8
Hawkins	69	41.7	31.8 - 51.6
Haywood	20	32.5	18.1 - 46.8
Henderson	46	56.4	40.0 - 72.7
Henry	55	46.6	34.1 - 59.0
Hickman	33	54.7	36.0 - 73.4
Houston	9	32.9	11.1 - 54.6
Humphreys	36	59.6	40.1 - 79.1
Jackson	10	28.9	10.9 - 46.9
Jefferson	55	40.8	29.9 - 51.6
Johnson	18	32.1	17.1 - 47.1
Knox	526	46.1	42.1 - 50.0
Lake	16	76.1	37.8 - 114.3
Lauderdale	35	44.8	29.8 - 59.8
Lawrence	51	40.2	29.0 - 51.4
Lewis	19	53.9	29.5 - 78.3
Lincoln	43	39.7	27.7 - 51.7
Loudon	65	46.6	35.1 - 58.2
McMinn	70	42.6	32.6 - 52.6
McNairy	44	53.2	37.2 - 69.2

County of Residence	Count	Rate	Confidence Interval
Macon	30	49.6	31.7 - 67.4
Madison	113	43.0	35.0 - 50.9
Marion	42	49.5	34.5 - 64.5
Marshall	33	42.8	28.1 - 57.5
Maury	107	53.6	43.4 - 63.7
Meigs	17	56.0	29.1 - 82.8
Monroe	50	42.5	30.7 - 54.4
Montgomery	113	43.3	35.3 - 51.4
Moore	9	45.8	15.8 - 75.8
Morgan	32	60.1	39.2 - 81.0
Obion	47	41.7	29.7 - 53.8
Overton	40	59.2	40.7 - 77.8
Perry	14	54.2	25.4 - 83.1
Pickett	9	44.1	14.9 - 73.2
Polk	43	81.3	56.9 - 105.7
Putnam	91	48.6	38.6 - 58.7
Rhea	43	48.1	33.6 - 62.6
Roane	84	45.0	35.3 - 54.7
Robertson	64	45.4	34.2 - 56.5
Rutherford	158	46.0	38.8 - 53.2
Scott	38	64.6	44.0 - 85.2
Sequatchie	9	26.1	9.0 - 43.2
Sevier	98	45.8	36.7 - 54.9
Shelby	932	41.8	39.1 - 44.4
Smith	20	38.5	21.6 - 55.4
Stewart	29	73.5	46.6 - 100.4
Sullivan	248	44.3	38.8 - 49.9
Sumner	173	49.7	42.3 - 57.2
Tipton	61	48.5	36.3 - 60.7
Trousdale	17	76.3	39.7 - 113.0
Unicoi	22	31.0	18.0 - 44.0
Union	18	39.4	21.1 - 57.7
Van Buren	6	34.7	6.8 - 62.7
Warren	35	29.2	19.4 - 38.9
Washington	124	36.7	30.2 - 43.2
Wayne	18	36.6	19.5 - 53.7
Weakley	33	29.9	19.6 - 40.2
White	34	44.3	29.3 - 59.4
Williamson	89	35.9	28.3 - 43.5
Wilson	69	31.5	24.0 - 39.0

Source: Tennessee Department of Health, Office of Health Statistics.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 deaths were reported

Table 23. Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
Prostate 1999-2003 White Males

County of Residence	Count	Rate	Confidence Interval
Tennessee	12268	107.7	105.8 - 109.7
Anderson	227	118.8	103.3 - 134.4
Bedford	68	84.6	64.2 - 105.1
Benton	52	103.0	74.4 - 131.6
Bledsoe	30	94.2	59.4 - 129.0
Blount	298	112.6	99.6 - 125.6
Bradley	187	96.4	82.1 - 110.6
Campbell	89	83.3	65.1 - 101.4
Cannon	30	91.2	57.5 - 124.9
Carroll	67	88.4	67.0 - 109.8
Carter	112	77.4	62.7 - 92.1
Cheatham	65	92.8	69.1 - 116.6
Chester	33	98.2	64.5 - 132.0
Claiborne	79	108.4	83.9 - 132.8
Clay	23	92.4	53.4 - 131.5
Cocke	78	96.0	73.8 - 118.2
Coffee	134	106.3	88.0 - 124.5
Crockett	32	97.0	63.2 - 130.9
Cumberland	284	157.0	137.9 - 176.0
Davidson	1210	140.5	132.5 - 148.5
Decatur	31	84.9	54.6 - 115.2
Dekalb	42	90.7	63.0 - 118.4
Dickson	95	101.0	80.3 - 121.7
Dyer	61	74.8	55.8 - 93.8
Fayette	33	54.2	35.2 - 73.2
Fentress	62	135.8	101.1 - 170.5
Franklin	105	103.5	83.2 - 123.8
Gibson	120	106.4	87.3 - 125.5
Giles	56	85.1	62.2 - 108.1
Grainger	50	87.9	62.6 - 113.2
Greene	124	74.5	61.0 - 88.1
Grundy	37	104.2	69.9 - 138.4
Hamblen	115	82.1	66.7 - 97.4
Hamilton	814	133.7	124.4 - 143.0
Hancock	16	89.1	44.9 - 133.4
Hardeman	52	101.3	73.6 - 128.9
Hardin	50	65.8	47.3 - 84.4
Hawkins	103	73.9	59.2 - 88.7
Haywood	21	77.5	44.1 - 110.9
Henderson	54	89.1	64.8 - 113.5
Henry	43	48.0	33.3 - 62.7
Hickman	54	99.1	72.2 - 125.9
Houston	18	73.6	39.4 - 107.8
Humphreys	57	121.8	88.9 - 154.6
Jackson	24	80.2	46.4 - 113.9
Jefferson	142	128.3	106.0 - 150.5
Johnson	29	58.6	36.9 - 80.3
Knox	881	111.2	103.7 - 118.6
Lake	8	50.6	15.2 - 86.0
Lauderdale	27	61.5	37.4 - 85.7
Lawrence	143	153.3	127.6 - 179.1
Lewis	30	101.3	64.3 - 138.2
Lincoln	35	45.1	29.8 - 60.5
Loudon	158	128.7	107.6 - 149.7
McMinn	125	103.6	85.0 - 122.2
McNairy	44	66.3	46.3 - 86.3

County of Residence	Count	Rate	Confidence Interval
Macon	34	72.2	47.3 - 97.1
Madison	149	96.6	81.0 - 112.3
Marion	71	105.0	79.0 - 131.0
Marshall	63	113.1	84.9 - 141.3
Maury	159	116.9	98.5 - 135.4
Meigs	33	113.2	73.4 - 152.9
Monroe	77	78.1	60.2 - 96.0
Montgomery	168	95.2	80.3 - 110.1
Moore	*		
Morgan	40	93.3	62.8 - 123.7
Obion	86	109.3	85.9 - 132.8
Overton	65	115.7	87.1 - 144.3
Perry	23	93.0	54.6 - 131.5
Pickett	18	108.8	57.1 - 160.5
Polk	42	94.0	64.3 - 123.6
Putnam	225	154.9	134.5 - 175.3
Rhea	78	110.9	85.6 - 136.1
Roane	167	109.2	92.4 - 126.0
Robertson	118	119.5	97.2 - 141.8
Rutherford	322	115.9	102.6 - 129.2
Scott	50	105.4	75.2 - 135.5
Sequatchie	22	83.0	47.3 - 118.6
Sevier	202	105.7	90.7 - 120.6
Shelby	824	82.3	76.6 - 88.0
Smith	33	79.4	52.0 - 106.8
Stewart	28	82.0	51.2 - 112.9
Sullivan	576	135.5	124.3 - 146.8
Sumner	337	126.5	112.5 - 140.5
Tipton	66	76.1	56.6 - 95.6
Trousdale	8	49.5	15.0 - 84.1
Unicoi	56	98.8	72.8 - 124.9
Union	39	98.7	65.8 - 131.7
Van Buren	13	80.8	36.7 - 125.0
Warren	75	81.3	62.6 - 100.0
Washington	320	127.0	112.8 - 141.2
Wayne	26	60.0	36.5 - 83.4
Weakley	71	88.6	67.8 - 109.3
White	97	152.7	121.6 - 183.8
Williamson	354	162.5	144.2 - 180.8
Wilson	171	101.0	84.8 - 117.1

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 cases were reported

Table 24. Total Cancer Deaths and Age-Adjusted¹ Cancer Mortality Rates²
Prostate 1999-2003 White Males

County of Residence	Count	Rate	Confidence Interval
Tennessee	2436	28.4	27.3 - 29.6
Anderson	35	21.2	14.0 - 28.4
Bedford	23	37.5	21.6 - 53.3
Benton	9	22.1	7.1 - 37.0
Bledsoe	7	33.3	6.8 - 59.8
Blount	63	30.8	23.0 - 38.6
Bradley	50	35.6	25.3 - 45.9
Campbell	20	31.0	16.8 - 45.1
Cannon	7	30.9	7.3 - 54.4
Carroll	11	15.7	6.3 - 25.1
Carter	45	40.2	28.0 - 52.3
Cheatham	9	22.8	6.9 - 38.8
Chester	12	39.7	17.0 - 62.5
Claiborne	18	34.9	18.1 - 51.7
Clay	*		
Cocke	20	29.6	16.1 - 43.1
Coffee	17	17.6	8.9 - 26.4
Crockett	8	26.2	8.0 - 44.4
Cumberland	33	25.8	16.4 - 35.3
Davidson	164	23.3	19.6 - 26.9
Decatur	9	33.1	11.4 - 54.9
Dekalb	7	21.9	5.5 - 38.2
Dickson	15	24.2	11.4 - 37.0
Dyer	16	26.6	13.4 - 39.7
Fayette	11	35.0	13.7 - 56.3
Fentress	14	41.5	19.3 - 63.7
Franklin	32	42.2	27.0 - 57.5
Gibson	31	29.6	19.1 - 40.1
Giles	18	37.8	20.1 - 55.5
Grainger	7	20.3	4.8 - 35.8
Greene	41	32.3	22.0 - 42.5
Grundy	12	43.5	18.6 - 68.4
Hamblen	33	34.2	22.1 - 46.3
Hamilton	151	31.9	26.7 - 37.1
Hancock	7	44.0	10.7 - 77.3
Hardeman	10	24.1	8.6 - 39.6
Hardin	15	23.9	11.5 - 36.3
Hawkins	21	20.1	11.1 - 29.2
Haywood	*		
Henderson	9	19.2	6.3 - 32.1
Henry	23	30.3	17.4 - 43.2
Hickman	10	23.3	7.5 - 39.0
Houston	6	27.8	5.5 - 50.2
Humphreys	*		
Jackson	6	23.1	3.7 - 42.5
Jefferson	20	26.8	14.4 - 39.3
Johnson	11	25.5	10.1 - 40.9
Knox	145	24.9	20.7 - 29.1
Lake	*		
Lauderdale	18	51.0	26.9 - 75.1
Lawrence	20	28.6	15.8 - 41.4
Lewis	*		
Lincoln	29	43.6	27.2 - 60.0
Loudon	25	29.6	17.0 - 42.2
McMinn	27	28.2	17.2 - 39.3
McNairy	18	32.9	17.4 - 48.5

County of Residence	Count	Rate	Confidence Interval
Macon	8	26.3	7.4 - 45.1
Madison	30	24.5	15.6 - 33.4
Marion	18	30.7	15.9 - 45.5
Marshall	13	30.4	13.6 - 47.1
Maury	21	20.1	11.4 - 28.9
Meigs	7	35.9	4.1 - 67.7
Monroe	21	28.5	16.1 - 40.8
Montgomery	25	20.8	12.2 - 29.4
Moore	*		
Morgan	9	33.9	11.5 - 56.4
Obion	17	27.4	14.2 - 40.6
Overton	14	30.1	14.0 - 46.2
Perry	*		
Pickett	*		
Polk	8	27.3	7.8 - 46.8
Putnam	38	30.3	20.5 - 40.0
Rhea	21	40.5	22.8 - 58.2
Roane	37	34.9	23.1 - 46.8
Robertson	20	22.8	12.2 - 33.5
Rutherford	56	31.6	22.9 - 40.3
Scott	13	38.6	16.7 - 60.4
Sequatchie	6	31.2	5.6 - 56.7
Sevier	35	28.2	18.2 - 38.3
Shelby	215	27.4	23.7 - 31.2
Smith	11	31.7	12.8 - 50.7
Stewart	7	26.8	6.5 - 47.2
Sullivan	99	31.5	25.0 - 38.0
Sumner	53	29.5	21.2 - 37.7
Tipton	13	24.1	10.3 - 37.9
Trousdale	*		
Unicoi	17	38.8	19.8 - 57.7
Union	11	49.0	18.2 - 79.8
Van Buren	*		
Warren	20	25.4	14.0 - 36.8
Washington	65	32.8	24.7 - 40.9
Wayne	6	19.8	3.9 - 35.6
Weakley	23	33.3	19.6 - 46.9
White	16	31.0	15.2 - 46.7
Williamson	34	28.6	18.4 - 38.9
Wilson	28	28.0	17.3 - 38.7

Source: Tennessee Department of Health, Office of Health Statistics.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 deaths were reported

Table 25. Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
Prostate 1999-2003 Black Males

County of Residence	Count	Rate	Confidence Interval
Tennessee	2066	157.8	150.8 - 164.8
Anderson	8	171.7	48.9 - 294.6
Bedford	12	171.1	71.7 - 270.6
Benton	*		
Bledsoe	0		
Blount	9	151.6	48.1 - 255.1
Bradley	9	143.2	47.2 - 239.2
Campbell	0		
Cannon	*		
Carroll	11	166.8	68.0 - 265.7
Carter	0		
Cheatham	*		
Chester	*		
Claiborne	0		
Clay	0		
Cocke	*		
Coffee	*		
Crockett	*		
Cumberland	0		
Davidson	375	186.0	166.4 - 205.5
Decatur	*		
Dekalb	*		
Dickson	7	189.4	44.1 - 334.8
Dyer	8	138.5	37.9 - 239.2
Fayette	20	103.0	57.3 - 148.8
Fentress	0		
Franklin	8	161.2	48.8 - 273.5
Gibson	27	148.8	92.4 - 205.1
Giles	14	190.6	89.5 - 291.6
Grainger	*		
Greene	*		
Grundy	0		
Hamblen	7	137.5	30.1 - 245.0
Hamilton	203	203.3	174.7 - 231.8
Hancock	0		
Hardeman	15	97.1	46.8 - 147.4
Hardin	*		
Hawkins	*		
Haywood	15	85.6	42.0 - 129.2
Henderson	*		
Henry	*		
Hickman	*		
Houston	0		
Humphreys	*		
Jackson	0		
Jefferson	*		
Johnson	0		
Knox	92	185.3	146.3 - 224.3
Lake	0		
Lauderdale	11	85.1	33.6 - 136.6
Lawrence	*		
Lewis	*		
Lincoln	7	147.2	35.7 - 258.8
Loudon	*		
McMinn	*		
McNairy	*		

County of Residence	Count	Rate	Confidence Interval
Macon	0		
Madison	60	144.3	107.2 - 181.5
Marion	*		
Marshall	*		
Maury	33	186.6	122.1 - 251.1
Meigs	0		
Monroe	*		
Montgomery	41	144.2	97.8 - 190.7
Moore	0		
Morgan	0		
Obion	6	99.7	19.6 - 179.8
Overton	0		
Perry	*		
Pickett	0		
Polk	0		
Putnam	*		
Rhea	*		
Roane	*		
Robertson	17	193.2	100.4 - 286.0
Rutherford	46	211.7	148.0 - 275.5
Scott	0		
Sequatchie	0		
Sevier	*		
Shelby	819	149.9	139.2 - 160.6
Smith	*		
Stewart	0		
Sullivan	*		
Sumner	23	193.7	112.1 - 275.3
Tipton	19	129.6	70.8 - 188.5
Trousdale	*		
Unicoi	0		
Union	*		
Van Buren	0		
Warren	*		
Washington	7	100.9	24.3 - 177.5
Wayne	*		
Weakley	*		
White	*		
Williamson	18	151.7	79.9 - 223.4
Wilson	20	188.4	100.6 - 276.3

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 cases were reported

Table 26. Total Cancer Deaths and Age-Adjusted¹ Cancer Mortality Rates²
Prostate 1999-2003 Black Males

County of Residence	Count	Rate	Confidence Interval
Tennessee	742	72.9	67.5 - 78.2
Anderson	*		
Bedford	*		
Benton	*		
Bledsoe	0		
Blount	*		
Bradley	*		
Campbell	0		
Cannon	0		
Carroll	*		
Carter	*		
Cheatham	0		
Chester	*		
Claiborne	0		
Clay	0		
Cocke	*		
Coffee	*		
Crockett	*		
Cumberland	0		
Davidson	110	78.3	63.2 - 93.4
Decatur	*		
Dekalb	0		
Dickson	*		
Dyer	*		
Fayette	11	58.1	23.3 - 92.8
Fentress	0		
Franklin	*		
Gibson	13	74.1	33.7 - 114.5
Giles	*		
Grainger	0		
Greene	0		
Grundy	0		
Hamblen	0		
Hamilton	79	97.8	76.0 - 119.6
Hancock	0		
Hardeman	8	64.6	19.4 - 109.7
Hardin	*		
Hawkins	*		
Haywood	8	47.9	14.3 - 81.5
Henderson	0		
Henry	*		
Hickman	*		
Houston	0		
Humphreys	*		
Jackson	0		
Jefferson	0		
Johnson	0		
Knox	22	59.4	34.1 - 84.6
Lake	*		
Lauderdale	11	92.0	37.4 - 146.5
Lawrence	*		
Lewis	0		
Lincoln	*		
Loudon	0		
McMinn	*		
McNairy	*		

County of Residence	Count	Rate	Confidence Interval
Macon	0		
Madison	25	71.6	43.5 - 99.8
Marion	0		
Marshall	*		
Maury	7	52.1	13.3 - 90.8
Meigs	0		
Monroe	*		
Montgomery	9	54.0	17.3 - 90.8
Moore	*		
Morgan	0		
Obion	*		
Overton	0		
Perry	0		
Pickett	0		
Polk	0		
Putnam	*		
Rhea	0		
Roane	*		
Robertson	*		
Rutherford	15	103.0	49.8 - 156.1
Scott	0		
Sequatchie	0		
Sevier	0		
Shelby	307	73.6	65.1 - 82.1
Smith	*		
Stewart	0		
Sullivan	*		
Sumner	7	76.8	19.4 - 134.2
Tipton	11	78.8	31.9 - 125.7
Trousdale	*		
Unicoi	0		
Union	0		
Van Buren	0		
Warren	*		
Washington	*		
Wayne	*		
Weakley	*		
White	0		
Williamson	7	76.8	18.6 - 135.1
Wilson	7	83.7	18.5 - 148.9

Source: Tennessee Department of Health, Office of Health Statistics.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 deaths were reported

Table 27. Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
Breast 1999-2003 White Females

County of Residence	Count	Rate	Confidence Interval
Tennessee	16145	117.6	115.8 - 119.4
Anderson	278	120.6	106.1 - 135.1
Bedford	118	127.8	104.6 - 151.1
Benton	68	128.3	96.9 - 159.7
Bledsoe	25	78.5	47.6 - 109.5
Blount	359	113.1	101.4 - 124.9
Bradley	280	118.9	104.9 - 132.9
Campbell	146	116.5	97.3 - 135.8
Cannon	38	102.9	69.9 - 136.0
Carroll	155	193.7	162.2 - 225.3
Carter	163	91.6	77.3 - 105.8
Cheatham	109	131.8	106.6 - 157.0
Chester	23	61.4	35.9 - 87.0
Claiborne	81	92.2	72.0 - 112.4
Clay	6	26.0	4.4 - 47.6
Cocke	102	101.8	81.9 - 121.7
Coffee	152	109.4	91.8 - 127.1
Crockett	42	105.4	72.8 - 138.0
Cumberland	203	117.3	100.3 - 134.3
Davidson	1469	126.6	120.1 - 133.1
Decatur	40	121.7	82.4 - 161.0
Dekalb	62	117.3	87.7 - 146.8
Dickson	120	105.9	86.9 - 124.9
Dyer	124	130.4	107.2 - 153.6
Fayette	42	73.7	51.2 - 96.3
Fentress	46	89.9	63.6 - 116.2
Franklin	127	108.6	89.5 - 127.8
Gibson	202	152.9	130.9 - 174.9
Giles	81	102.7	80.0 - 125.5
Grainger	87	145.5	114.6 - 176.4
Greene	212	107.6	92.9 - 122.3
Grundy	47	114.8	81.4 - 148.2
Hamblen	200	119.6	102.9 - 136.4
Hamilton	1031	133.7	125.5 - 142.0
Hancock	17	82.5	42.3 - 122.6
Hardeman	44	89.7	62.4 - 116.9
Hardin	68	86.5	65.4 - 107.5
Hawkins	100	64.1	51.4 - 76.8
Haywood	33	99.7	64.4 - 134.9
Henderson	88	123.9	97.7 - 150.0
Henry	115	120.3	97.5 - 143.1
Hickman	68	117.2	89.2 - 145.2
Houston	21	87.2	49.0 - 125.3
Humphreys	164	313.6	264.9 - 362.4
Jackson	35	104.0	69.1 - 138.9
Jefferson	151	121.4	101.8 - 140.9
Johnson	42	83.2	57.5 - 109.0
Knox	1281	128.6	121.5 - 135.7
Lake	24	135.6	79.3 - 191.9
Lauderdale	62	120.5	90.0 - 151.0
Lawrence	116	95.8	78.1 - 113.5
Lewis	30	89.8	57.5 - 122.1
Lincoln	51	53.6	38.8 - 68.5
Loudon	179	132.4	112.6 - 152.3
McMinn	136	94.6	78.5 - 110.7
McNairy	85	115.8	90.5 - 141.2
Macon	44	77.1	54.0 - 100.1

County of Residence	Count	Rate	Confidence Interval
Madison	203	113.0	97.3 - 128.7
Marion	103	130.7	105.3 - 156.1
Marshall	84	120.7	94.7 - 146.7
Maury	226	135.3	117.6 - 153.0
Meigs	36	119.6	80.0 - 159.2
Monroe	120	110.0	90.1 - 129.8
Montgomery	232	103.9	90.5 - 117.3
Moore	6	43.0	8.1 - 77.9
Morgan	39	75.6	51.7 - 99.4
Obion	99	107.1	85.6 - 128.7
Overton	53	87.3	63.4 - 111.1
Perry	32	133.5	86.1 - 180.8
Pickett	16	107.4	52.4 - 162.3
Polk	48	95.0	67.8 - 122.3
Putnam	206	120.6	103.9 - 137.2
Rhea	99	120.4	96.3 - 144.4
Roane	195	115.3	98.9 - 131.8
Robertson	139	107.6	89.7 - 125.5
Rutherford	418	120.3	108.7 - 132.0
Scott	76	133.6	103.4 - 163.8
Sequatchie	16	50.9	25.8 - 76.0
Sevier	234	111.2	96.8 - 125.5
Shelby	1560	121.3	115.2 - 127.4
Smith	50	101.6	73.2 - 130.0
Stewart	34	95.7	63.2 - 128.2
Sullivan	604	121.5	111.6 - 131.3
Sumner	367	110.1	98.8 - 121.4
Tipton	109	104.7	84.9 - 124.4
Trousdale	15	80.9	39.8 - 122.0
Unicoi	70	114.5	86.7 - 142.2
Union	36	74.1	49.8 - 98.4
Van Buren	15	89.6	43.9 - 135.3
Warren	120	111.6	91.5 - 131.7
Washington	405	133.0	120.0 - 146.1
Wayne	40	88.6	60.5 - 116.6
Weakley	105	112.4	90.4 - 134.4
White	81	115.3	89.9 - 140.8
Williamson	412	142.6	128.4 - 156.9
Wilson	250	115.9	101.4 - 130.4

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 cases were reported

Table 28. Total Cancer Deaths and Age-Adjusted¹ Cancer Mortality Rates²
Breast 1999-2003 White Females

County of Residence	Count	Rate	Confidence Interval
Tennessee	3590	25.1	24.3 - 25.9
Anderson	49	20.5	14.6 - 26.4
Bedford	18	18.6	10.0 - 27.3
Benton	9	17.3	5.4 - 29.3
Bledsoe	7	22.3	5.6 - 39.0
Blount	78	23.8	18.5 - 29.1
Bradley	70	30.1	23.0 - 37.1
Campbell	27	20.9	12.9 - 28.9
Cannon	13	34.1	15.3 - 52.8
Carroll	21	20.8	11.6 - 29.9
Carter	55	29.0	21.2 - 36.7
Cheatham	30	36.8	23.4 - 50.2
Chester	10	23.1	8.6 - 37.7
Claiborne	28	31.4	19.7 - 43.1
Clay	*		
Cocke	35	34.8	23.2 - 46.3
Coffee	50	34.0	24.5 - 43.6
Crockett	10	24.9	9.2 - 40.5
Cumberland	31	16.2	10.4 - 22.1
Davidson	344	28.4	25.3 - 31.4
Decatur	19	49.7	26.5 - 72.8
Dekalb	13	23.0	10.4 - 35.6
Dickson	32	29.0	18.9 - 39.0
Dyer	22	21.5	12.4 - 30.6
Fayette	12	19.1	8.3 - 30.0
Fentress	8	15.4	4.7 - 26.1
Franklin	25	20.9	12.6 - 29.1
Gibson	45	28.2	19.6 - 36.8
Giles	21	23.8	13.4 - 34.1
Grainger	19	32.3	17.7 - 47.0
Greene	50	23.8	17.2 - 30.5
Grundy	10	24.1	8.9 - 39.3
Hamblen	37	21.8	14.7 - 29.0
Hamilton	232	27.9	24.2 - 31.5
Hancock	7	31.9	7.8 - 56.0
Hardeman	12	22.4	9.2 - 35.5
Hardin	20	23.7	13.0 - 34.4
Hawkins	44	26.8	18.8 - 34.8
Haywood	6	12.8	2.3 - 23.3
Henderson	16	22.6	11.4 - 33.8
Henry	23	21.0	12.1 - 29.9
Hickman	10	17.0	6.4 - 27.5
Houston	6	22.2	4.1 - 40.3
Humphreys	13	22.6	10.2 - 35.0
Jackson	6	16.1	3.1 - 29.0
Jefferson	28	20.6	12.9 - 28.3
Johnson	14	26.1	12.2 - 40.0
Knox	231	22.0	19.2 - 24.9
Lake	7	38.6	9.3 - 67.9
Lauderdale	13	24.2	10.8 - 37.7
Lawrence	31	23.4	15.0 - 31.7
Lewis	10	29.2	11.0 - 47.4
Lincoln	22	21.5	12.4 - 30.6
Loudon	33	23.7	15.4 - 32.0
McMinn	34	22.3	14.7 - 29.8
McNairy	15	18.0	8.8 - 27.2

County of Residence	Count	Rate	Confidence Interval
Macon	17	27.2	14.1 - 40.4
Madison	42	22.2	15.4 - 29.0
Marion	20	24.9	13.9 - 35.9
Marshall	22	30.6	17.7 - 43.5
Maury	48	27.5	19.7 - 35.4
Meigs	*		
Monroe	20	18.2	10.1 - 26.2
Montgomery	62	28.5	21.3 - 35.6
Moore	*		
Morgan	13	24.8	11.2 - 38.3
Obion	17	16.3	8.4 - 24.2
Overton	15	22.8	11.0 - 34.5
Perry	7	27.0	6.6 - 47.4
Pickett	*		
Polk	7	14.0	3.5 - 24.4
Putnam	59	32.8	24.4 - 41.3
Rhea	29	34.1	21.5 - 46.8
Roane	45	25.4	17.9 - 32.9
Robertson	30	23.5	15.1 - 31.9
Rutherford	79	24.0	18.7 - 29.3
Scott	17	29.7	15.5 - 43.9
Sequatchie	9	26.9	9.3 - 44.6
Sevier	57	27.3	20.2 - 34.4
Shelby	327	24.3	21.7 - 27.0
Smith	14	25.6	12.0 - 39.2
Stewart	11	29.3	11.8 - 46.8
Sullivan	147	28.3	23.7 - 33.0
Sumner	82	24.5	19.2 - 29.8
Tipton	31	29.4	19.0 - 39.7
Trousdale	7	38.1	9.3 - 66.9
Unicoi	23	33.9	19.5 - 48.2
Union	12	24.3	10.5 - 38.2
Van Buren	8	48.9	14.8 - 82.9
Warren	36	33.0	22.1 - 43.9
Washington	65	20.4	15.4 - 25.4
Wayne	9	18.5	6.3 - 30.6
Weakley	21	21.3	12.0 - 30.6
White	20	26.9	15.0 - 38.8
Williamson	50	18.7	13.3 - 24.0
Wilson	64	29.0	21.9 - 36.2

Source: Tennessee Department of Health, Office of Health Statistics.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 deaths were reported

Table 29. Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
Breast 1999-2003 Black Females

County of Residence	Count	Rate	Confidence Interval
Tennessee	2257	106.8	102.4 - 111.3
Anderson	10	145.8	54.8 - 236.9
Bedford	*		
Benton	*		
Bledsoe	0		
Blount	8	94.8	28.4 - 161.1
Bradley	10	128.9	47.6 - 210.1
Campbell	*		
Cannon	0		
Carroll	16	178.0	90.1 - 265.8
Carter	*		
Cheatham	*		
Chester	*		
Claiborne	*		
Clay	*		
Cocke	*		
Coffee	*		
Crockett	*		
Cumberland	*		
Davidson	365	114.3	102.3 - 126.2
Decatur	0		
Dekalb	*		
Dickson	7	161.2	37.4 - 285.1
Dyer	21	177.7	101.0 - 254.5
Fayette	17	59.6	31.0 - 88.3
Fentress	0		
Franklin	*		
Gibson	30	114.0	72.7 - 155.2
Giles	*		
Grainger	0		
Greene	0		
Grundy	0		
Hamblen	12	174.9	74.7 - 275.1
Hamilton	166	104.1	88.2 - 119.9
Hancock	0		
Hardeman	35	154.8	103.1 - 206.5
Hardin	*		
Hawkins	0		
Haywood	17	64.6	33.6 - 95.5
Henderson	*		
Henry	12	135.6	57.8 - 213.4
Hickman	*		
Houston	0		
Humphreys	*		
Jackson	0		
Jefferson	*		
Johnson	0		
Knox	71	90.9	69.7 - 112.2
Lake	*		
Lauderdale	22	116.5	67.3 - 165.7
Lawrence	0		
Lewis	0		
Lincoln	*		
Loudon	0		
McMinn	7	117.9	29.3 - 206.6
McNairy	*		

County of Residence	Count	Rate	Confidence Interval
Macon	0		
Madison	69	98.5	75.0 - 122.0
Marion	7	196.1	49.9 - 342.4
Marshall	6	107.1	20.9 - 193.2
Maury	31	120.9	78.2 - 163.7
Meigs	*		
Monroe	*		
Montgomery	48	118.3	83.4 - 153.1
Moore	*		
Morgan	0		
Obion	7	86.3	22.3 - 150.3
Overton	0		
Perry	0		
Pickett	0		
Polk	0		
Putnam	*		
Rhea	0		
Roane	6	139.2	27.4 - 250.9
Robertson	15	122.0	60.0 - 184.1
Rutherford	47	153.0	108.0 - 198.1
Scott	0		
Sequatchie	0		
Sevier	0		
Shelby	998	103.2	96.7 - 109.7
Smith	*		
Stewart	*		
Sullivan	8	106.5	32.3 - 180.7
Sumner	30	180.2	115.1 - 245.2
Tipton	29	122.9	78.0 - 167.9
Trousdale	*		
Unicoi	0		
Union	0		
Van Buren	0		
Warren	*		
Washington	6	67.2	12.8 - 121.6
Wayne	0		
Weakley	9	182.0	61.7 - 302.2
White	*		
Williamson	22	127.2	73.0 - 181.4
Wilson	15	102.3	50.5 - 154.1

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 cases were reported

Table 30. Total Cancer Deaths and Age-Adjusted¹ Cancer Mortality Rates²
Breast 1999-2003 Black Females

County of Residence	Count	Rate	Confidence Interval
Tennessee	727	34.8	32.2 - 37.3
Anderson	*		
Bedford	0		
Benton	0		
Bledsoe	0		
Blount	*		
Bradley	*		
Campbell	0		
Cannon	0		
Carroll	*		
Carter	*		
Cheatham	*		
Chester	*		
Claiborne	0		
Clay	*		
Cocke	0		
Coffee	0		
Crockett	*		
Cumberland	0		
Davidson	106	33.7	27.2 - 40.2
Decatur	0		
Dekalb	0		
Dickson	*		
Dyer	7	52.7	12.0 - 93.5
Fayette	6	23.2	4.6 - 41.9
Fentress	0		
Franklin	0		
Gibson	9	32.0	10.6 - 53.3
Giles	*		
Grainger	0		
Greene	*		
Grundy	0		
Hamblen	*		
Hamilton	61	37.9	28.3 - 47.4
Hancock	0		
Hardeman	12	51.5	22.0 - 81.0
Hardin	*		
Hawkins	0		
Haywood	*		
Henderson	0		
Henry	*		
Hickman	0		
Houston	0		
Humphreys	*		
Jackson	0		
Jefferson	*		
Johnson	0		
Knox	29	37.5	23.8 - 51.1
Lake	*		
Lauderdale	*		
Lawrence	0		
Lewis	0		
Lincoln	*		
Loudon	0		
McMinn	*		
McNairy	*		

County of Residence	Count	Rate	Confidence Interval
Macon	0		
Madison	20	25.9	14.4 - 37.4
Marion	*		
Marshall	*		
Maury	8	30.3	9.2 - 51.4
Meigs	0		
Monroe	0		
Montgomery	16	45.8	22.9 - 68.7
Moore	0		
Morgan	0		
Obion	*		
Overton	0		
Perry	0		
Pickett	0		
Polk	0		
Putnam	0		
Rhea	*		
Roane	*		
Robertson	*		
Rutherford	14	44.1	20.4 - 67.8
Scott	0		
Sequatchie	0		
Sevier	*		
Shelby	348	37.4	33.4 - 41.4
Smith	*		
Stewart	*		
Sullivan	*		
Sumner	*		
Tipton	9	35.3	12.0 - 58.5
Trousdale	*		
Unicoi	0		
Union	0		
Van Buren	0		
Warren	*		
Washington	*		
Wayne	0		
Weakley	*		
White	0		
Williamson	*		
Wilson	*		

Source: Tennessee Department of Health, Office of Health Statistics.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 deaths were reported

Table. 31 Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
Colon (incl. rectum) All Races 1999-2003 Males

County of Residence	Count	Rate	Confidence Interval
Tennessee	6919	56.8	55.4 - 58.2
Anderson	116	61.9	50.5 - 73.4
Bedford	42	47.5	33.0 - 62.1
Benton	26	52.8	32.0 - 73.6
Bledsoe	12	48.2	18.3 - 78.0
Blount	145	57.7	48.0 - 67.3
Bradley	88	46.9	36.7 - 57.2
Campbell	76	77.8	59.3 - 96.4
Cannon	13	42.0	18.7 - 65.3
Carroll	48	61.1	43.6 - 78.6
Carter	61	41.4	30.8 - 52.0
Cheatham	28	44.6	27.1 - 62.2
Chester	8	20.8	6.4 - 35.2
Claiborne	39	52.7	35.4 - 69.9
Clay	14	64.2	29.2 - 99.2
Cocke	45	59.2	41.0 - 77.3
Coffee	70	55.9	42.6 - 69.2
Crockett	20	53.6	30.0 - 77.2
Cumberland	99	59.8	47.2 - 72.4
Davidson	615	59.1	54.4 - 63.9
Decatur	20	56.4	31.3 - 81.5
Dekalb	29	70.0	43.9 - 96.0
Dickson	66	74.6	55.8 - 93.4
Dyer	46	57.4	40.5 - 74.3
Fayette	35	49.5	32.6 - 66.3
Fentress	28	65.5	40.5 - 90.4
Franklin	64	66.0	49.3 - 82.6
Gibson	85	67.3	53.0 - 81.7
Giles	39	55.6	37.7 - 73.5
Grainger	20	45.7	24.2 - 67.1
Greene	88	53.4	41.9 - 64.9
Grundy	27	76.4	46.9 - 105.9
Hamblen	98	72.8	57.8 - 87.7
Hamilton	383	55.4	49.7 - 61.1
Hancock	*		
Hardeman	40	57.3	39.4 - 75.3
Hardin	22	30.4	17.3 - 43.5
Hawkins	43	35.3	24.3 - 46.3
Haywood	23	54.3	31.9 - 76.6
Henderson	34	54.7	35.9 - 73.5
Henry	54	57.1	41.6 - 72.6
Hickman	29	53.6	33.6 - 73.6
Houston	6	23.0	4.5 - 41.4
Humphreys	28	62.2	38.0 - 86.4
Jackson	16	58.1	28.3 - 88.0
Jefferson	70	65.9	49.8 - 82.1
Johnson	14	27.9	13.0 - 42.7
Knox	471	57.5	52.2 - 62.8
Lake	10	66.7	23.9 - 109.4
Lauderdale	36	62.2	41.5 - 82.8
Lawrence	58	60.7	44.7 - 76.8
Lewis	16	58.5	29.1 - 87.9
Lincoln	37	45.2	30.4 - 60.1
Loudon	63	61.4	45.2 - 77.5
McMinn	52	44.0	31.7 - 56.3
McNairy	18	27.0	14.2 - 39.9

County of Residence	Count	Rate	Confidence Interval
Macon	33	75.7	48.6 - 102.7
Madison	113	59.4	48.3 - 70.5
Marion	32	45.3	28.9 - 61.7
Marshall	42	76.0	52.4 - 99.6
Maury	119	85.2	69.5 - 100.8
Meigs	11	43.4	16.1 - 70.7
Monroe	52	53.2	38.3 - 68.0
Montgomery	108	56.5	45.1 - 67.9
Moore	*		
Morgan	24	57.9	33.6 - 82.2
Obion	59	71.8	53.2 - 90.3
Overton	38	70.9	47.9 - 93.9
Perry	11	59.9	23.5 - 96.3
Pickett	8	47.0	13.1 - 80.9
Polk	22	61.7	35.0 - 88.4
Putnam	94	67.2	53.5 - 80.9
Rhea	44	62.0	43.2 - 80.9
Roane	94	66.7	52.8 - 80.6
Robertson	76	72.7	55.6 - 89.8
Rutherford	153	51.8	43.1 - 60.6
Scott	24	61.6	35.5 - 87.6
Sequatchie	9	35.5	11.3 - 59.6
Sevier	89	52.8	41.2 - 64.4
Shelby	914	59.7	55.7 - 63.7
Smith	16	40.9	20.5 - 61.2
Stewart	26	76.3	46.4 - 106.2
Sullivan	221	54.4	47.1 - 61.8
Sumner	151	58.5	48.7 - 68.3
Tipton	44	50.1	34.6 - 65.7
Trousdale	11	60.2	24.4 - 96.0
Unicoi	22	41.0	23.7 - 58.2
Union	22	54.4	29.4 - 79.5
Van Buren	7	48.3	12.0 - 84.6
Warren	50	57.2	41.0 - 73.4
Washington	130	50.1	41.4 - 58.9
Wayne	26	61.5	37.4 - 85.5
Weakley	45	55.2	39.0 - 71.5
White	38	59.6	40.3 - 79.0
Williamson	111	50.4	39.8 - 61.0
Wilson	91	49.5	38.5 - 60.4

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 cases were reported

Table 32. Total Cancer Cases and Age-Adjusted¹ Cancer Incidence Rates²
Colon (incl. rectum) All Races 1999-2003 Females

County of Residence	Count	Rate	Confidence Interval
Tennessee	6842	41.3	40.3 - 42.3
Anderson	117	45.0	36.7 - 53.3
Bedford	46	43.2	30.6 - 55.8
Benton	22	35.3	20.2 - 50.4
Bledsoe	13	42.1	19.0 - 65.2
Blount	127	36.5	30.1 - 42.8
Bradley	84	34.2	26.9 - 41.6
Campbell	47	33.7	24.0 - 43.4
Cannon	18	44.4	23.8 - 65.1
Carroll	52	46.1	33.3 - 59.0
Carter	60	30.9	23.0 - 38.9
Cheatham	34	42.5	28.0 - 57.0
Chester	14	30.2	14.3 - 46.1
Claiborne	44	46.9	33.0 - 60.9
Clay	7	23.7	6.1 - 41.3
Cocke	39	36.8	25.2 - 48.5
Coffee	64	41.3	31.1 - 51.5
Crockett	20	40.1	22.4 - 57.9
Cumberland	74	39.8	30.5 - 49.1
Davidson	684	44.1	40.7 - 47.4
Decatur	18	36.6	19.1 - 54.1
Dekalb	28	50.7	31.6 - 69.7
Dickson	62	52.4	39.3 - 65.4
Dyer	47	41.4	29.5 - 53.3
Fayette	24	27.0	16.2 - 37.9
Fentress	18	35.2	18.8 - 51.7
Franklin	31	25.5	16.3 - 34.6
Gibson	96	51.8	41.1 - 62.5
Giles	34	34.1	22.6 - 45.7
Grainger	27	44.3	27.5 - 61.1
Greene	81	38.1	29.8 - 46.5
Grundy	30	67.3	42.9 - 91.7
Hamblen	64	34.9	26.3 - 43.5
Hamilton	417	41.7	37.6 - 45.7
Hancock	7	30.6	7.5 - 53.7
Hardeman	30	38.6	24.8 - 52.5
Hardin	30	32.2	20.6 - 43.9
Hawkins	50	30.0	21.6 - 38.3
Haywood	33	53.7	35.3 - 72.2
Henderson	29	35.3	22.3 - 48.2
Henry	58	50.7	37.3 - 64.2
Hickman	31	51.1	33.0 - 69.2
Houston	11	37.4	15.2 - 59.6
Humphreys	20	32.9	18.4 - 47.4
Jackson	13	36.1	16.1 - 56.2
Jefferson	63	48.7	36.6 - 60.9
Johnson	22	37.9	22.0 - 53.7
Knox	456	39.6	35.9 - 43.2
Lake	7	39.8	8.9 - 70.7
Lauderdale	39	51.3	35.0 - 67.6
Lawrence	57	45.5	33.5 - 57.6
Lewis	9	25.4	8.7 - 42.1
Lincoln	45	40.2	28.2 - 52.2
Loudon	58	41.8	30.8 - 52.7
McMinn	64	41.2	31.0 - 51.4
McNairy	35	41.5	27.6 - 55.4

County of Residence	Count	Rate	Confidence Interval
Macon	25	41.0	24.8 - 57.3
Madison	98	37.2	29.8 - 44.6
Marion	36	43.6	29.3 - 57.9
Marshall	33	42.0	27.6 - 56.4
Maury	83	41.3	32.4 - 50.2
Meigs	15	48.8	24.0 - 73.7
Monroe	54	45.4	33.2 - 57.6
Montgomery	96	36.5	29.2 - 43.9
Moore	7	33.5	8.5 - 58.4
Morgan	14	26.7	12.6 - 40.8
Obion	50	44.3	31.7 - 56.9
Overton	31	46.3	29.8 - 62.9
Perry	13	48.7	22.0 - 75.3
Pickett	*		
Polk	18	34.4	18.3 - 50.5
Putnam	101	53.5	43.0 - 64.0
Rhea	33	35.6	23.2 - 47.9
Roane	81	44.5	34.7 - 54.4
Robertson	71	50.7	38.9 - 62.5
Rutherford	144	40.5	33.8 - 47.2
Scott	16	27.0	13.8 - 40.3
Sequatchie	9	27.3	9.4 - 45.2
Sevier	83	39.7	31.1 - 48.3
Shelby	977	43.1	40.4 - 45.8
Smith	21	36.1	20.5 - 51.7
Stewart	15	41.1	20.1 - 62.0
Sullivan	236	44.1	38.4 - 49.8
Sumner	131	37.7	31.2 - 44.1
Tipton	58	45.8	34.0 - 57.6
Trousdale	17	73.4	38.3 - 108.5
Unicoi	33	47.2	30.7 - 63.7
Union	14	29.3	13.9 - 44.8
Van Buren	8	48.6	14.8 - 82.4
Warren	41	33.6	23.3 - 44.0
Washington	146	43.0	36.0 - 50.1
Wayne	14	29.0	13.7 - 44.4
Weakley	41	36.2	24.8 - 47.6
White	40	54.0	37.0 - 70.9
Williamson	136	52.5	43.5 - 61.5
Wilson	90	41.3	32.7 - 49.9

Source: Tennessee Cancer Registry.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 cases were reported

Table 33. Total Cancer Deaths and Age-Adjusted¹ Cancer Mortality Rates²
Colon (incl. rectum) All Races 1999-2003 Males

County of Residence	Count	Rate	Confidence Interval
Tennessee	2949	25.8	24.8 - 26.7
Anderson	51	27.8	20.1 - 35.6
Bedford	20	26.3	14.3 - 38.2
Benton	6	12.6	2.2 - 22.9
Bledsoe	*		
Blount	53	22.3	16.1 - 28.4
Bradley	37	19.9	13.1 - 26.6
Campbell	34	36.9	23.3 - 50.6
Cannon	*		
Carroll	33	43.4	28.5 - 58.4
Carter	40	30.3	20.5 - 40.0
Cheatham	8	12.7	3.4 - 21.9
Chester	9	26.0	8.9 - 43.2
Claiborne	15	29.0	13.8 - 44.3
Clay	11	49.6	19.3 - 80.0
Cocke	20	29.7	16.1 - 43.2
Coffee	37	34.7	23.0 - 46.3
Crockett	10	28.0	10.5 - 45.5
Cumberland	42	30.7	20.6 - 40.8
Davidson	222	22.2	19.2 - 25.2
Decatur	11	32.2	12.9 - 51.5
Dekalb	11	29.4	11.5 - 47.3
Dickson	32	35.7	22.7 - 48.6
Dyer	16	20.2	10.1 - 30.3
Fayette	15	22.4	10.7 - 34.1
Fentress	11	25.7	10.1 - 41.3
Franklin	26	28.8	17.2 - 40.5
Gibson	40	31.8	21.9 - 41.7
Giles	23	34.2	20.0 - 48.5
Grainger	12	29.9	12.0 - 47.8
Greene	45	28.9	20.2 - 37.7
Grundy	9	29.6	9.9 - 49.3
Hamblen	41	36.0	24.4 - 47.6
Hamilton	146	22.6	18.8 - 26.3
Hancock	*		
Hardeman	20	31.4	17.3 - 45.5
Hardin	17	25.1	12.8 - 37.3
Hawkins	25	20.7	12.2 - 29.2
Haywood	10	24.6	9.2 - 39.9
Henderson	18	34.0	17.8 - 50.3
Henry	26	29.7	17.9 - 41.4
Hickman	14	24.3	11.3 - 37.2
Houston	*		
Humphreys	19	43.0	22.7 - 63.3
Jackson	6	22.0	3.9 - 40.2
Jefferson	22	22.8	12.7 - 32.9
Johnson	9	17.8	5.7 - 29.8
Knox	171	21.8	18.5 - 25.2
Lake	*		
Lauderdale	12	20.3	8.6 - 32.0
Lawrence	19	20.8	11.3 - 30.4
Lewis	11	44.2	17.3 - 71.1
Lincoln	21	25.3	14.3 - 36.3
Loudon	22	23.4	13.0 - 33.9
McMinn	29	26.1	16.2 - 36.1
McNairy	16	24.8	12.2 - 37.4

County of Residence	Count	Rate	Confidence Interval
Macon	13	25.4	11.5 - 39.4
Madison	42	23.7	16.4 - 30.9
Marion	15	24.6	11.4 - 37.8
Marshall	17	32.3	16.5 - 48.1
Maury	31	23.2	14.8 - 31.5
Meigs	*		
Monroe	19	23.2	12.4 - 34.0
Montgomery	37	19.8	13.0 - 26.7
Moore	*		
Morgan	9	24.4	7.5 - 41.4
Obion	27	33.7	20.8 - 46.6
Overton	22	41.0	23.6 - 58.4
Perry	8	42.0	12.6 - 71.5
Pickett	*		
Polk	11	26.4	10.2 - 42.7
Putnam	31	23.2	14.9 - 31.5
Rhea	17	26.9	13.7 - 40.1
Roane	26	18.2	11.0 - 25.4
Robertson	21	21.9	12.0 - 31.9
Rutherford	61	23.7	17.3 - 30.1
Scott	11	28.7	10.4 - 47.0
Sequatchie	*		
Sevier	39	25.6	17.1 - 34.1
Shelby	458	31.9	28.8 - 34.9
Smith	*		
Stewart	6	18.7	3.6 - 33.8
Sullivan	98	27.1	21.5 - 32.7
Sumner	63	25.6	19.0 - 32.2
Tipton	23	28.5	16.4 - 40.7
Trousdale	*		
Unicoi	9	16.9	5.8 - 28.1
Union	14	42.0	17.3 - 66.7
Van Buren	*		
Warren	21	22.9	12.9 - 32.8
Washington	63	25.3	18.9 - 31.7
Wayne	*		
Weakley	19	23.7	13.0 - 34.5
White	12	19.8	8.3 - 31.3
Williamson	44	23.2	15.7 - 30.7
Wilson	45	26.8	18.3 - 35.2

Source: Tennessee Department of Health, Office of Health Statistics.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 deaths were reported

Table 34. Total Cancer Deaths and Age-Adjusted¹ Cancer Mortality Rates²
Colon (incl. rectum) All Races 1999-2003 Females

County of Residence	Count	Rate	Confidence Interval
Tennessee	2954	17.4	16.7 - 18.0
Anderson	33	12.6	8.2 - 17.0
Bedford	16	14.7	7.5 - 22.0
Benton	10	15.5	5.5 - 25.5
Bledsoe	6	19.6	3.8 - 35.4
Blount	38	10.7	7.3 - 14.2
Bradley	32	13.2	8.6 - 17.8
Campbell	26	17.9	11.0 - 24.8
Cannon	9	21.6	7.4 - 35.9
Carroll	21	18.3	10.1 - 26.5
Carter	30	14.6	9.3 - 19.9
Cheatham	10	13.5	5.0 - 22.1
Chester	11	20.8	8.4 - 33.3
Claiborne	21	21.6	12.3 - 30.9
Clay	8	28.8	8.6 - 49.0
Cocke	14	13.3	6.3 - 20.3
Coffee	26	16.1	9.9 - 22.4
Crockett	9	14.7	4.8 - 24.7
Cumberland	27	14.2	8.7 - 19.6
Davidson	268	16.7	14.6 - 18.7
Decatur	7	12.6	3.1 - 22.1
Dekalb	*		
Dickson	22	18.7	10.9 - 26.6
Dyer	21	16.6	9.4 - 23.8
Fayette	20	23.0	12.9 - 33.1
Fentress	10	20.2	7.6 - 32.8
Franklin	15	11.9	5.7 - 18.0
Gibson	27	13.4	8.1 - 18.6
Giles	13	12.7	5.6 - 19.7
Grainger	9	14.3	4.9 - 23.8
Greene	23	10.8	6.3 - 15.3
Grundy	12	27.3	11.6 - 43.0
Hamblen	33	18.1	11.9 - 24.3
Hamilton	187	17.8	15.2 - 20.4
Hancock	*		
Hardeman	14	17.4	8.2 - 26.6
Hardin	12	12.0	5.2 - 18.9
Hawkins	29	17.2	10.9 - 23.6
Haywood	9	14.9	5.1 - 24.7
Henderson	9	10.7	3.7 - 17.6
Henry	33	27.7	18.0 - 37.5
Hickman	13	21.0	9.6 - 32.5
Houston	*		
Humphreys	8	13.1	4.0 - 22.3
Jackson	6	15.2	2.9 - 27.6
Jefferson	28	20.9	13.1 - 28.7
Johnson	10	17.5	6.5 - 28.6
Knox	190	16.0	13.7 - 18.3
Lake	*		
Lauderdale	27	34.8	21.5 - 48.1
Lawrence	17	13.4	7.0 - 19.9
Lewis	8	20.8	6.3 - 35.2
Lincoln	23	20.3	11.8 - 28.7
Loudon	19	12.5	6.8 - 18.1
McMinn	27	16.9	10.5 - 23.3
McNairy	11	12.7	5.1 - 20.4

County of Residence	Count	Rate	Confidence Interval
Macon	19	29.5	16.1 - 42.9
Madison	49	18.1	13.0 - 23.3
Marion	17	20.5	10.7 - 30.3
Marshall	12	15.1	6.5 - 23.8
Maury	39	19.2	13.1 - 25.2
Meigs	*		
Monroe	20	16.3	9.1 - 23.5
Montgomery	51	19.5	14.1 - 24.8
Moore	*		
Morgan	*		
Obion	26	20.3	12.4 - 28.1
Overton	8	11.3	3.4 - 19.2
Perry	*		
Pickett	0		
Polk	12	21.2	9.1 - 33.2
Putnam	26	13.7	8.4 - 19.0
Rhea	21	21.9	12.4 - 31.4
Roane	29	14.8	9.4 - 20.2
Robertson	22	15.6	9.1 - 22.2
Rutherford	63	17.7	13.3 - 22.1
Scott	10	16.8	6.4 - 27.2
Sequatchie	10	29.7	11.3 - 48.0
Sevier	29	14.4	9.1 - 19.6
Shelby	499	21.8	19.9 - 23.7
Smith	10	16.3	6.1 - 26.6
Stewart	9	20.8	7.2 - 34.4
Sullivan	103	18.4	14.8 - 22.0
Sumner	64	17.9	13.5 - 22.3
Tipton	28	22.0	13.9 - 30.2
Trousdale	*		
Unicoi	12	16.8	7.1 - 26.5
Union	6	11.9	2.3 - 21.5
Van Buren	*		
Warren	26	21.4	13.1 - 29.6
Washington	48	13.7	9.8 - 17.7
Wayne	8	16.8	4.9 - 28.6
Weakley	27	21.3	13.0 - 29.5
White	20	25.0	13.9 - 36.1
Williamson	40	16.5	11.3 - 21.7
Wilson	42	19.6	13.7 - 25.6

Source: Tennessee Department of Health, Office of Health Statistics.

¹ Rates are per 100,000 and are age adjusted using the 2000 U.S. population standard

² Counts and rates are suppressed when fewer than 6 deaths were reported

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